ONLINE TOPIC ASSESSMENT

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EXAMVIEW® TEST GENERATOR

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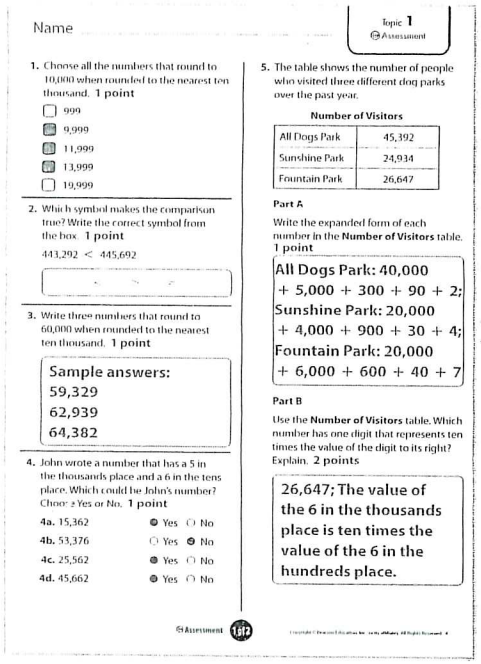
Assessment

Topic Assessment Masters



Name

Topic 1 Assessment

1. Choose all the numbers that round to 10,000 when rounded to the nearest ten thousand. **1 point**
   - ☐ 999
   - ☑ 9,999
   - ☑ 11,999
   - ☑ 13,999
   - ☐ 19,999
2. Which symbol makes the comparison true? Write the correct symbol from the box. **1 point**
   443,292 < 445,692
3. Write three numbers that round to 60,000 when rounded to the nearest ten thousand. **1 point**
   Sample answers: 59,329; 62,939; 64,382
4. John wrote a number that has a 5 in the thousands place and a 6 in the tens place. Which could be John's number? Choose Yes or No. **1 point**
   - 4a. 15,362 — ● Yes ○ No
   - 4b. 53,376 — ○ Yes ● No
   - 4c. 25,562 — ● Yes ○ No
   - 4d. 45,662 — ● Yes ○ No
5. The table shows the number of people who visited three different dog parks over the past year.

Number of Visitors	
All Dogs Park	45,392
Sunshine Park	24,934
Fountain Park	26,647

Part A
Write the expanded form of each number in the **Number of Visitors** table. **1 point**
All Dogs Park: 40,000 + 5,000 + 300 + 90 + 2; Sunshine Park: 20,000 + 4,000 + 900 + 30 + 4; Fountain Park: 20,000 + 6,000 + 600 + 40 + 7

Part B
Use the **Number of Visitors** table. Which number has one digit that represents ten times the value of the digit to its right? Explain. **2 points**
26,647; The value of the 6 in the thousands place is ten times the value of the 6 in the hundreds place.

Assessment 1 of 2

6. Patrick writes 20,033 in expanded form. What did Patrick write? **1 point**
   20,000 + 30 + 3
7. Draw lines to match the value of the underlined digit in the numbers on the left to the numbers on the right. **1 point**
   - 83,284 → 80
   - 84,794 → 800
   - 38,385 → 8,000
   - 48,834 → 80,000
8. Which is two hundred thirty-nine thousand, six hundred fourteen written in base-ten numerals? **1 point**
   - Ⓐ 200,614
   - Ⓑ 239,014
   - Ⓒ 239,614
   - Ⓓ 392,146
9. Choose Yes or No to tell if the comparison is correct. **1 point**
   - 9a. 65,215 > 65,512 — ○ Yes ● No
   - 9b. 292,200 < 229,200 — ○ Yes ● No
   - 9c. 890,242 > 890,224 — ● Yes ○ No
   - 9d. 101,111 < 111,111 — ● Yes ○ No
10. The table shows the number of people at the last four baseball games.

Baseball Game Attendance	
Game	Number of People
1	45,753
2	42,250
3	43,160
4	41,779

Part A
Which of the 4 games had the least number of people? the greatest number of people? Write the number name for the number of people at each of these games. **2 points**
Game 4; forty-one thousand, seven hundred seventy-nine; Game 1; forty-five thousand, seven hundred fifty-three

Part B
Draw a place-value chart. Record the attendance for Game 2. Explain how the value of the 2 in the thousands place compares with the value of the 2 in the hundreds place. **3 points**
Check students' work. Sample answer: The 2 in the thousands place is ten times greater than the 2 in the hundreds place.

Assessment 2 of 2

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1	1	All correct choices selected
2	1	Correct symbol selected
3	1	All correct possible numbers written
4	1	All correct choices selected

RTI Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.NBT.A.3	2	F10
2	4.NBT.A.2	1	F11
3	4.NBT.A.3	2	F10
4	4.NBT.A.1	1	F9
5A	4.NBT.A.2	1	F9
5B	4.NBT.A.1, MP.3	3	F9
6	4.NBT.A.2	1	F9
7	4.NBT.A.2	1	F9
8	4.NBT.A.2	1	F9
9	4.NBT.A.2	1	F11
10A	4.NBT.A.2	2	F9, F11
10B	4.NBT.A.1	3	F9

The Topic Assessment Masters assess the same content item for item as the Topic Assessment in the Student's Edition.

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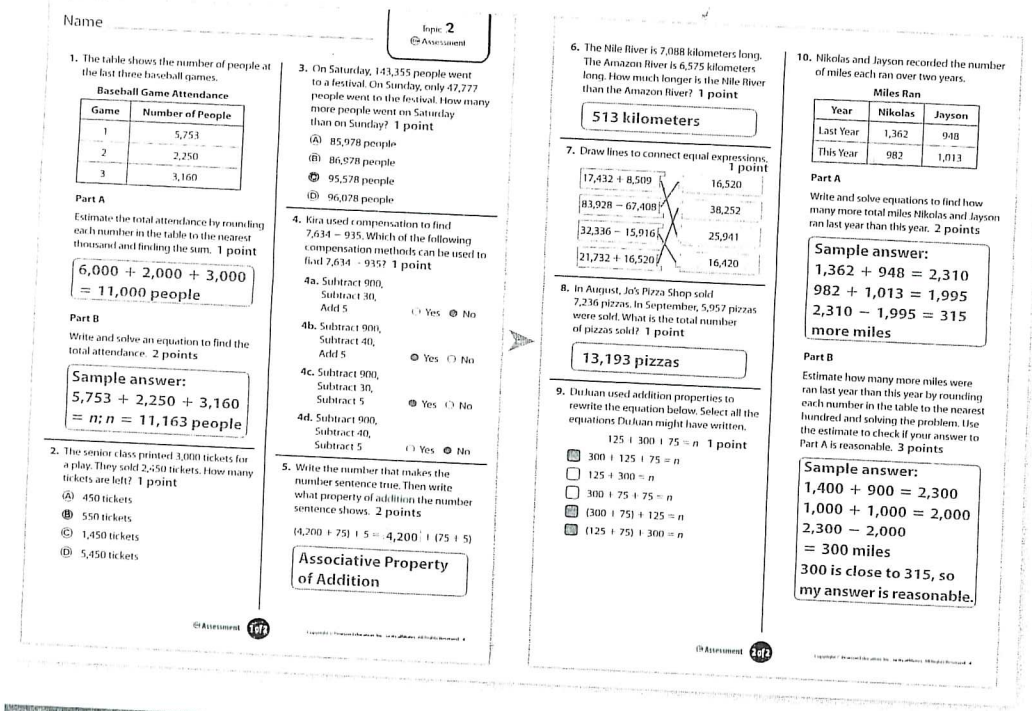
Assessment

Topic Assessment Masters



Name _____ Topic 2 Assessment

1. The table shows the number of people at the last three baseball games.

Baseball Game Attendance

Game	Number of People
1	5,753
2	2,250
3	3,160

Part A

Estimate the total attendance by rounding each number in the table to the nearest thousand and finding the sum. 1 point

6,000 + 2,000 + 3,000 = 11,000 people

Part B

Write and solve an equation to find the total attendance. 2 points

Sample answer:
5,753 + 2,250 + 3,160 = n; n = 11,163 people

2. The senior class printed 3,000 tickets for a play. They sold 2,450 tickets. How many tickets are left? 1 point

Ⓐ 450 tickets
Ⓑ 550 tickets
Ⓒ 1,450 tickets
Ⓓ 5,450 tickets

3. On Saturday, 143,355 people went to a festival. On Sunday, only 47,777 people went to the festival. How many more people went on Saturday than on Sunday? 1 point

Ⓐ 85,978 people
Ⓑ 86,978 people
Ⓒ 95,578 people
Ⓓ 96,078 people

4. Kira used compensation to find 7,634 − 935. Which of the following compensation methods can be used to find 7,634 − 935? 1 point

4a. Subtract 900, Subtract 30, Add 5 — ○ Yes ● No
4b. Subtract 900, Subtract 40, Add 5 — ● Yes ○ No
4c. Subtract 900, Subtract 30, Subtract 5 — ● Yes ○ No
4d. Subtract 900, Subtract 40, Subtract 5 — ○ Yes ● No

5. Write the number that makes the number sentence true. Then write what property of addition the number sentence shows. 2 points

(4,200 + 75) + 5 = 4,200 + (75 + 5)

Associative Property of Addition

Assessment 1 of 2

6. The Nile River is 7,088 kilometers long. The Amazon River is 6,575 kilometers long. How much longer is the Nile River than the Amazon River? 1 point

513 kilometers

7. Draw lines to connect equal expressions. 1 point

17,432 + 8,509	16,520
83,928 − 67,408	38,252
32,336 − 15,916	25,941
21,732 + 16,520	16,420

8. In August, Jo's Pizza Shop sold 7,236 pizzas. In September, 5,957 pizzas were sold. What is the total number of pizzas sold? 1 point

13,193 pizzas

9. Duluan used addition properties to rewrite the equation below. Select all the equations Duluan might have written. 1 point

125 + 300 + 75 = n

- [x] 300 + 125 + 75 = n
- [ ] 125 + 300 = n
- [ ] 300 + 75 + 75 = n
- [x] (300 + 75) + 125 = n
- [x] (125 + 75) + 300 = n

10. Nikolas and Jayson recorded the number of miles each ran over two years.

Miles Ran

Year	Nikolas	Jayson
Last Year	1,362	948
This Year	982	1,013

Part A

Write and solve equations to find how many more total miles Nikolas and Jayson ran last year than this year. 2 points

Sample answer:
1,362 + 948 = 2,310
982 + 1,013 = 1,995
2,310 − 1,995 = 315 more miles

Part B

Estimate how many more miles were ran last year than this year by rounding each number in the table to the nearest hundred and solving the problem. Use the estimate to check if your answer to Part A is reasonable. 3 points

Sample answer:
1,400 + 900 = 2,300
1,000 + 1,000 = 2,000
2,300 − 2,000 = 300 miles
300 is close to 315, so my answer is reasonable.

Assessment 2 of 2

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1A	1	Correct answer
1B	2	Correct equation and answer
	1	Correct equation or answer
2	1	Correct choice selected
3	1	Correct choice selected

RtI Item Analysis for Diagnosis and Intervention

Item	© Standard	DOK	MDIS
1A	4.NBT.B.4	2	G5
1B	4.NBT.B.4, 4.OA.A.3	2	G17
2	4.NBT.B.4	1	G16
3	4.NBT.B.4	1	G19
4	4.NBT.B.4	2	G9
5	4.NBT.B.4	1	G1
6	4.NBT.B.4	1	G16
7	4.NBT.B.4	1	G18, G19
8	4.NBT.B.4	1	G17
9	4.NBT.B.4	1	G1
10A	4.NBT.B.4, 4.OA.A.3	2	G15, G17
10B	4.NBT.B.4, 4.OA.A.3, MP.2	3	G5, G6

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USE STRATEGIES AND PROPERTIES TO MULTIPLY BY 1-DIGIT NUMBERS

Topic Assessment Masters

Name _____ Topic 3 Assessment

1. Dorian stores his baseball card collection in 4 boxes. Each box holds 217 cards. How many cards are in Dorian's collection? Choose numbers from the box to complete and solve the problem. **1 point**

2 1 7 × 4	28	35
28	40	170
40	280	800
+ 800	888	868
868		

2. In each of 3 games last month, Julia's bowling score was 195. Use compensation to find the total score for Julia's 3 games. **2 points**

Sample answer: 195 is close to 200 so multiply 3 × 200 and then subtract 3 × 5; 600 − 15 = 585.

3. Mrs. Wallingford sells trading cards in boxes of 30 and in boxes of 60. If she sells 5 boxes of 60, how many trading cards did Mrs. Wallingford sell? **1 point**

- Ⓐ 30 trading cards
- ● 300 trading cards
- Ⓒ 350 trading cards
- Ⓓ 3,000 trading cards

4. Elliot's father drives 2,037 miles each month. How many miles does he drive in 4 months? **1 point**

8,148 miles

5. The Bumblebee Bakery is taking orders for cupcakes. The cupcakes are sold in boxes.

Cupcakes	Number of Boxes
Strawberry Crème	37
Blackberry Bliss	72
Chocolate Delight	43
Surprise Assortment	17

Part A

There are 8 Blackberry Bliss cupcakes in each box. Write and solve an equation to find how many Blackberry Bliss cupcakes were ordered. **2 points**

$8 \times 72 = b$; $b = 576$ Blackberry Bliss cupcakes

Part B

There are 8 cupcakes in each box of the Surprise Assortment. Draw an area model and show the partial products to find how many Surprise Assortment cupcakes were ordered. **2 points**

	10	7
8	8 × 10 = 80	8 × 7 = 56

80 + 56 = 136 Surprise Assortment cupcakes

Assessment 1 of 4

6. Select all the expressions that could be used to find the area of a rectangular driveway that is 327 feet long and 9 feet wide. **1 point**

- ☐ 327 ÷ 9
- ☑ 9 × 327
- ☑ 9 × (300 ÷ 20 ÷ 7)
- ☑ (9 × 300) − (9 × 20) − (9 × 7)
- ☐ 9 ÷ (300 ÷ 20 ÷ 7)

7. Each storage box holds 224 ornaments. Draw an array to show and find the number of ornaments in 4 boxes. **2 points**

There are 896 ornaments in 4 boxes.

8. Wakeboards cost $1,149. Find the cost for 3 boards. Explain how you know your answer is reasonable. **2 points**

$3,447; Sample answer: 1 wakeboard is about $1,000, so 3 wakeboards are about $3,000. $3,447 is close to $3,000, so my answer is reasonable.

9. The table shows the number of sandwiches sold in a busy deli in 1 month.

Type	Number
Chicken	230
Roast Beef	189
Ham	305
Turkey	267

Part A

If the same number of turkey sandwiches were sold for 4 months in a row, how many turkey sandwiches would be sold in all? **1 point**

1,068 turkey sandwiches

Part B

If the same number were sold each month, how many roast beef sandwiches and ham sandwiches would be sold in 6 months? Explain. **2 points**

2,964 sandwiches; Sample answer: 189 + 305 = 494; 494 × 6 = 2,964

Part C

The deli sells 3 times as many tuna sandwiches in one month as roast beef. How many more tuna sandwiches were sold than roast beef in 5 months? Explain. **2 points**

1,890 more tuna sandwiches; Sample answer: 189 × 3 = 567; 567 − 189 = 378; 378 × 5 = 1,890

Assessment 2 of 4

10. Estimate to check if each product is reasonable. Choose numbers from the box to complete the equations. Then choose whether the product is reasonable. **2 points**

700	800	900
1,000	3,200	4,500

4 × 787 = 2,808

4 × 800 = 3,200

Reasonable | Not Reasonable

5 × 932 = 4,660

5 × 900 = 4,500

Reasonable | Not Reasonable

11. Which expression shows how to use breaking apart to find 3 × 156? **1 point**

- Ⓐ (3 × 1) + (3 × 5) + (3 × 6)
- ● (3 × 100) + (3 × 50) + (3 × 6)
- Ⓒ (3 × 100) + (3 × 5) + (3 × 6)
- Ⓓ (3 × 1) + (3 × 50) + (3 × 600)

12. Maria earns $183 per month for babysitting. Which are reasonable estimates for the amount of money Maria will have if she saves all of the money she earns for 3 months? **1 point**

- ☐ $300
- ☐ $400
- ☑ $500
- ☑ $600
- ☐ $900

13. A copy clerk makes 4 copies of a 256-page document. How many pages were copied? Draw a bar diagram to solve the problem. **2 points**

p			
256	256	256	256

$p = 1{,}024$ pages

14. Rudy's Pizza makes 317 pizzas and 54 subs every day. How many items are made in 3 days? **1 point**

1,113 items

15. Each package holds 72 markers. Mr. Alvarez has 4 packages. Write and solve an equation that can be used to find the number of markers Mr. Alvarez has. **2 points**

m			
72	72	72	72

$4 \times 72 = m$; $m = 288$ markers

16. A carpenter bought 3 boxes of nails. Each box has 218 nails. Which is the best estimate for the total number of nails purchased? **1 point**

- Ⓐ 200
- Ⓑ 400
- Ⓒ 500
- ● 600

Assessment 3 of 4

17. Mr. Brouard would like to purchase a laptop computer for each of his 2 daughters and 1 son. The computers each cost $387.

Part A

Mr. Brouard thinks the total cost should be about $1,100. Is this amount reasonable? Explain. **2 points**

Yes; Sample answer: 3 × $387 is about 3 × $400 or $1,200. Since the actual cost for a computer is less than $400 the actual cost will be less than $1,200. Therefore, $1,100 is a reasonable estimate.

Part B

Write and solve an equation to find the total cost of the computers. Explain why your answer is reasonable. **3 points**

Sample answer: $3 \times \$387 = c$; $c = \$1{,}161$; $3 \times \$400 = \$1{,}200$; $1,200 is close to $1,161, so my answer is reasonable.

18. Draw lines to match the total number of books with the total number of pages for that book. **1 point**

Book Title	Number of Pages
Math Mysteries	200
Earth Science	300
Caves and Caving	600
Daily Dictionary	1,000

5 copies of Earth Science — 2,000

6 copies of Math Mysteries — 1,500

2 copies of Daily Dictionary — 1,800

3 copies of Caves and Caving — 1,200

19. Myrna's father drives 790 miles to and from work each month. Use mental math to find how many miles he drives in 5 months. Explain. **2 points**

3,950 miles; Sample answer: 790 is close to 800, so I can multiply 5 × 800 and then subtract 5 × 10; 4,000 − 50 = 3,950.

20. Select all the partial products for 7 × 532. **1 point**

- ☑ 14
- ☐ 35
- ☑ 210
- ☑ 3,500
- ☐ 4,000

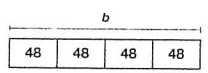
Assessment 4 of 4

The Topic Assessment Masters assess the same content item for item as the Topic Assessment in the Student's Edition.

Ⓓ $(5 \times 600) + (5 \times 10) + (5 \times 7)$

12. Ivan earned $115 a month for working at the grocery store. Which are reasonable estimates for the amount of money Ivan would have if he saves all of the money he earns for 6 months? 1 point

- ☐ $200
- ☑ $600
- ☑ $700
- ☐ $1,200
- ☐ $1,500



2 points

$48 \times 4 = b$
$b = 192$ people

16. Mrs. Henderson bought 4 boxes of facial tissues. Each box has 174 tissues. Which is the best estimate for the total number of tissues Mrs. Henderson bought? 1 point

- Ⓐ 200
- Ⓑ 800
- Ⓒ 1,200
- Ⓓ 1,740

your answer is reasonable. 3 points

Sample answer:
$4 \times \$415 = k$; $k = \$1,660$;
$4 \times \$400 = \$1,600$;
$1,600 is close to $1,660, so my answer is reasonable.

can multiply 6×300 and then subtract 6×5;
$1,800 - 30 = 1,770$.

20. Select all the partial products for 8×321. 1 point

- ☑ 8
- ☐ 80
- ☑ 160
- ☐ 1,600
- ☑ 2,400

RTI

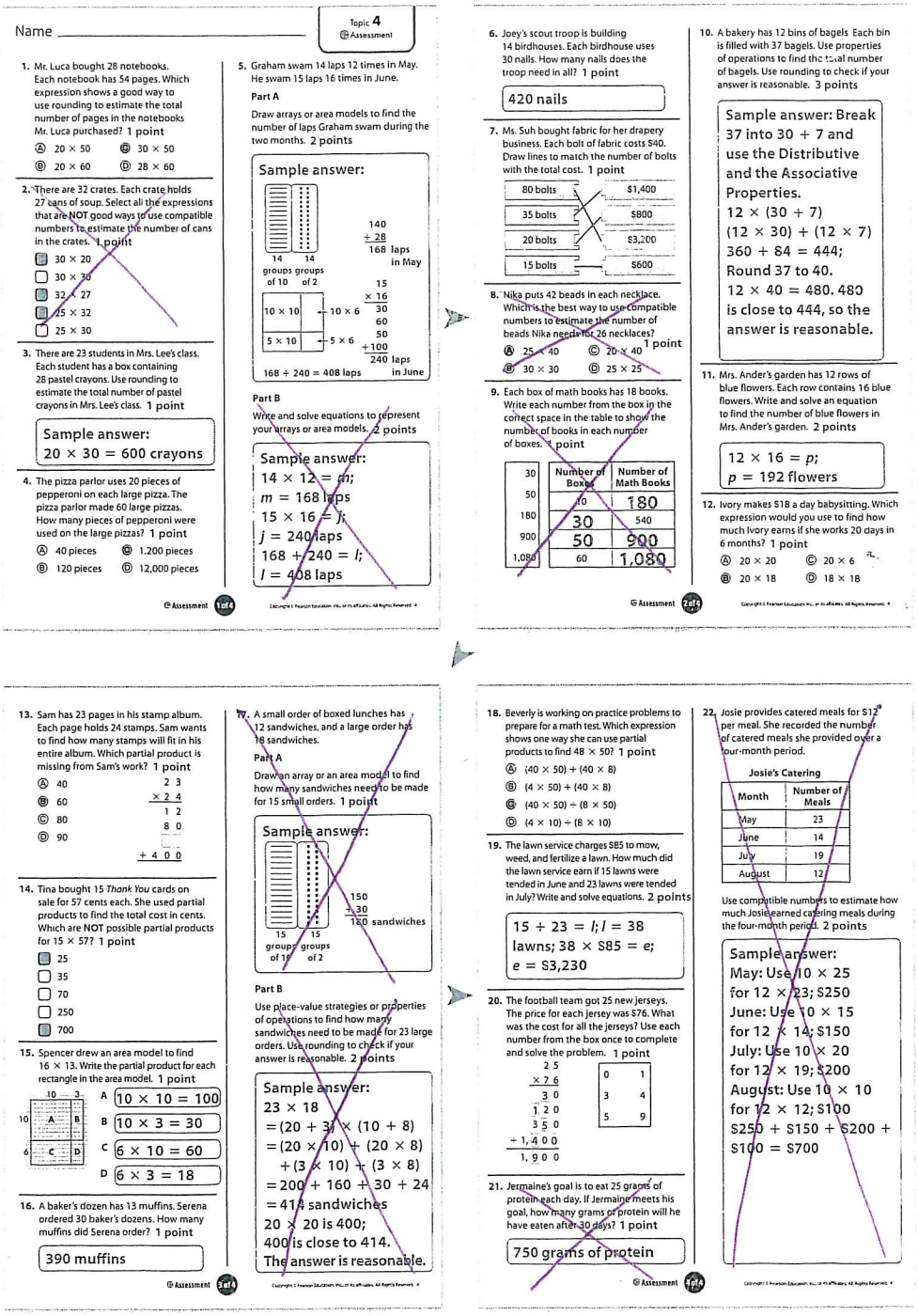
Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.NBT.B.5	1	G47
3	4.NBT.B.5	1	G40
4	4.NBT.B.5	1	G49
5A	4.NBT.B.5	1	G46
6	4.NBT.B.5	1	F42
8	4.OA.A.3	2	G49
9A	4.NBT.B.5	1	G47
9B	4.NBT.B.5	2	G47
11	4.NBT.B.5	1	F42
13	4.NBT.B.5	2	G47
14	4.NBT.B.5	1	G47
15	4.NBT.B.5, MP.4	1	G46
16	4.NBT.B.5	1	G42
17A	4.OA.A.3	2	G42
17B	4.OA.A.3	3	G47

VOLUME 1 TOPICS 1–7

USE STRATEGIES AND PROPERTIES TO MULTIPLY BY 2-DIGIT NUMBERS

Topic Assessment Masters



Name _____ Topic 4 Assessment

1. Mr. Luca bought 28 notebooks. Each notebook has 54 pages. Which expression shows a good way to use rounding to estimate the total number of pages in the notebooks Mr. Luca purchased? 1 point
   - Ⓐ 20 × 50
   - Ⓒ 30 × 50
   - Ⓑ 20 × 60
   - Ⓓ 28 × 60

2. There are 32 crates. Each crate holds 27 cans of soup. Select all the expressions that are NOT good ways to use compatible numbers to estimate the number of cans in the crates. 1 point
   - ☑ 30 × 20
   - ☐ 30 × 30
   - ☑ 32 × 27
   - ☑ 25 × 32
   - ☐ 25 × 30

3. There are 23 students in Mrs. Lee's class. Each student has a box containing 28 pastel crayons. Use rounding to estimate the total number of pastel crayons in Mrs. Lee's class. 1 point

   Sample answer: 20 × 30 = 600 crayons

4. The pizza parlor uses 20 pieces of pepperoni on each large pizza. The pizza parlor made 60 large pizzas. How many pieces of pepperoni were used on the large pizzas? 1 point
   - Ⓐ 40 pieces
   - Ⓒ 1,200 pieces
   - Ⓑ 120 pieces
   - Ⓓ 12,000 pieces

Assessment 1 of 4

5. Graham swam 14 laps 12 times in May. He swam 15 laps 16 times in June.

   Part A

   Draw arrays or area models to find the number of laps Graham swam during the two months. 2 points

   Sample answer:

   14 groups of 10 × 14 groups of 2: 140 + 28 = 168 laps in May

   15 × 16: 10 × 10 = 100; 10 × 6 = 60; 5 × 10 = 50; 5 × 6 = 30; 100 + 60 + 50 + 30 = 240 laps in June

   168 + 240 = 408 laps

   Part B

   Write and solve equations to represent your arrays or area models. 2 points

   Sample answer:
   14 × 12 = m;
   m = 168 laps
   15 × 16 = j;
   j = 240 laps
   168 + 240 = l;
   l = 408 laps

6. Joey's scout troop is building 14 birdhouses. Each birdhouse uses 30 nails. How many nails does the troop need in all? 1 point

   420 nails

7. Ms. Suh bought fabric for her drapery business. Each bolt of fabric costs $40. Draw lines to match the number of bolts with the total cost. 1 point

80 bolts	$1,400
35 bolts	$800
20 bolts	$3,200
15 bolts	$600

8. Nika puts 42 beads in each necklace. Which is the best way to use compatible numbers to estimate the number of beads Nika needs for 26 necklaces? 1 point
   - Ⓐ 25 × 40
   - Ⓒ 20 × 40
   - Ⓑ 30 × 30
   - Ⓓ 25 × 25

9. Each box of math books has 18 books. Write each number from the box in the correct space in the table to show the number of books in each number of boxes. 1 point

   30, 50, 180, 900, 1,080

Number of Boxes	Number of Math Books
10	180
30	540
50	900
60	1,080

10. A bakery has 12 bins of bagels. Each bin is filled with 37 bagels. Use properties of operations to find the total number of bagels. Use rounding to check if your answer is reasonable. 3 points

    Sample answer: Break 37 into 30 + 7 and use the Distributive and the Associative Properties.
    12 × (30 + 7)
    (12 × 30) + (12 × 7)
    360 + 84 = 444;
    Round 37 to 40.
    12 × 40 = 480. 480 is close to 444, so the answer is reasonable.

11. Mrs. Ander's garden has 12 rows of blue flowers. Each row contains 16 blue flowers. Write and solve an equation to find the number of blue flowers in Mrs. Ander's garden. 2 points

    12 × 16 = p;
    p = 192 flowers

12. Ivory makes $18 a day babysitting. Which expression would you use to find how much Ivory earns if she works 20 days in 6 months? 1 point
    - Ⓐ 20 × 20
    - Ⓒ 20 × 6
    - Ⓑ 20 × 18
    - Ⓓ 18 × 18

Assessment 2 of 4

13. Sam has 23 pages in his stamp album. Each page holds 24 stamps. Sam wants to find how many stamps will fit in his entire album. Which partial product is missing from Sam's work? 1 point

    23 × 24: 12, 80, 400
    - Ⓐ 40
    - Ⓑ 60
    - Ⓒ 80
    - Ⓓ 90

14. Tina bought 15 *Thank You* cards on sale for 57 cents each. She used partial products to find the total cost in cents. Which are NOT possible partial products for 15 × 57? 1 point
    - ☑ 25
    - ☐ 35
    - ☐ 70
    - ☐ 250
    - ☑ 700

15. Spencer drew an area model to find 16 × 13. Write the partial product for each rectangle in the area model. 1 point

    - A: 10 × 10 = 100
    - B: 10 × 3 = 30
    - C: 6 × 10 = 60
    - D: 6 × 3 = 18

16. A baker's dozen has 13 muffins. Serena ordered 30 baker's dozens. How many muffins did Serena order? 1 point

    390 muffins

Assessment 3 of 4

17. A small order of boxed lunches has 12 sandwiches, and a large order has 18 sandwiches.

    Part A

    Draw an array or an area model to find how many sandwiches need to be made for 15 small orders. 1 point

    Sample answer:

    15 groups of 10 × 15 groups of 2: 150 + 30 = 180 sandwiches

    Part B

    Use place-value strategies or properties of operations to find how many sandwiches need to be made for 23 large orders. Use rounding to check if your answer is reasonable. 2 points

    Sample answer:
    23 × 18
    = (20 + 3) × (10 + 8)
    = (20 × 10) + (20 × 8) + (3 × 10) + (3 × 8)
    = 200 + 160 + 30 + 24
    = 414 sandwiches
    20 × 20 is 400;
    400 is close to 414.
    The answer is reasonable.

18. Beverly is working on practice problems to prepare for a math test. Which expression shows one way she can use partial products to find 48 × 50? 1 point
    - Ⓐ (40 × 50) + (40 × 8)
    - Ⓑ (4 × 50) + (40 × 8)
    - Ⓒ (40 × 50) + (8 × 50)
    - Ⓓ (4 × 10) + (8 × 10)

19. The lawn service charges $85 to mow, weed, and fertilize a lawn. How much did the lawn service earn if 15 lawns were tended in June and 23 lawns were tended in July? Write and solve equations. 2 points

    15 + 23 = l; l = 38 lawns; 38 × $85 = e;
    e = $3,230

20. The football team got 25 new jerseys. The price for each jersey was $76. What was the cost for all the jerseys? Use each number from the box once to complete and solve the problem. 1 point

    25 × 76: 30, 120, 350, 1,400, 1,900

0	1
3	4
5	9

21. Jermaine's goal is to eat 25 grams of protein each day. If Jermaine meets his goal, how many grams of protein will he have eaten after 30 days? 1 point

    750 grams of protein

22. Josie provides catered meals for $12 per meal. She recorded the number of catered meals she provided over a four-month period.

    Josie's Catering

Month	Number of Meals
May	23
June	14
July	19
August	12

    Use compatible numbers to estimate how much Josie earned catering meals during the four-month period. 2 points

    Sample answer:
    May: Use 10 × 25 for 12 × 23; $250
    June: Use 10 × 15 for 12 × 14; $150
    July: Use 10 × 20 for 12 × 19; $200
    August: Use 10 × 10 for 12 × 12; $100
    $250 + $150 + $200 + $100 = $700

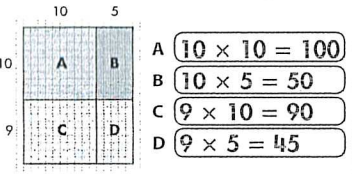
Assessment 4 of 4

The Topic Assessment Masters assess the same content item for item as the Topic Assessment in the Student's Edition.

to find the total cost in cents. Which are **NOT** possible partial products for 25 × 17? **1 point**

- ☐ 35
- ☐ 50
- ☒ 60
- ☐ 140
- ☒ 170

15. Lorin drew an area model to find 19 × 15. Write the partial product for each rectangle in the area model. **1 point**



A 10 × 10 = 100
B 10 × 5 = 50
C 9 × 10 = 90
D 9 × 5 = 45

16. The librarian ordered 29 sets of bookmarks. Each set contained 20 bookmarks. How many bookmarks did the librarian order? **1 point**

580 bookmarks

5 × 10	5 × 8

50
+ 100
270 chairs

Part B

Use place-value strategies or properties of operations to find how many chairs are at 19 small tables. Use rounding to check if your answer is reasonable. **2 points**

Sample answer:
12 × 19
= (10 + 2) × (10 + 9)
= (10 × 10) + (10 × 9) + (2 × 10) + (2 × 9)
= 100 + 90 + 20 + 18
= 228 chairs
10 × 20 = 200
200 is close to 228.
The answer is reasonable.

18 + 23 = *i*; *i* = 41 trees;
78 × 41 = *c*; *c* = $3,198

20. A school bought 28 new microscopes. The price for each microscope was $87. What was the cost for all the microscopes? Use each number from the box once to complete and solve the equation. **1 point**

28
× 87
56
1 40
6 40
+ 1,600
$ 2,436

0	1
2	3
4	6

21. Tori's goal is to learn 15 new Spanish words each day. If Tori meets her goal, how many new Spanish words will she have learned after 40 days? **1 point**

600 new words

how much Philip earned during the one-month period. **2 points**

Sample answer:
Week A: Use 10 × 15 for 11 × 15; 150
Week B: Use 10 × 25 for 11 × 24; 250
Week C: Use 10 × 20 for 11 × 22; 200
Week D: Use 10 × 20 for 11 × 18; 200

150 + 250 + 200 + 200 = $800

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS	Item	Standard	DOK	MDIS	Item	Standard	DOK	MDIS
1	4.NBT.B.5	1	G65					16	4.NBT.B.5	1	G67
3	4.NBT.B.5	2	G65	10	4.NBT.B.5, 4.OA.A.3	3	G68, G70				
4	4.NBT.B.5	1	G64	11	4.NBT.B.5	2	G68	18	4.NBT.B.5	1	G66
5A	4.NBT.B.5	2	G66	12	4.NBT.B.5	1	G67	19	4.NBT.B.5	2	G68
				13	4.NBT.B.5	1	G66	20	4.NBT.B.5	1	G66
6	4.NBT.B.5	1	G67	14	4.NBT.B.5	1	G66				
7	4.NBT.B.5	1	G67	15	4.NBT.B.5	1	G66				

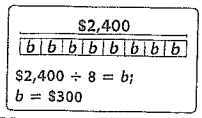
USE STRATEGIES AND PROPERTIES TO DIVIDE BY 1-DIGIT NUMBERS

Topic Assessment Masters

Name _____ Topic 5 @Assessment

1. Tim earned $124 washing 6 cars. He earned the same amount for each car. Select all the equations that show reasonable estimates for the amount Tim earned washing each car. 1 point
   - ☐ $200 ÷ 5 = $40
   - ☑ $120 ÷ 6 = $20
   - ☒ $100 ÷ 5 = $20
   - ☐ $100 ÷ 6 = $10
   - ☐ $200 ÷ 4 = $50

2. Mr. Moretti saves an equal amount of money each month for 8 months. He is saving to buy a boat that costs $2,400. Draw a bar diagram. Write and solve an equation to find how much money Mr. Moretti needs to save each month to buy the boat. 3 points



$2,400 ÷ 8 = b;
b = $300

3. Mrs. Brooks has 34 yards of ribbon to make wreaths. Each wreath requires 5 yards of ribbon. How many wreaths can Mrs. Brooks make? How many yards will she have left? 2 points

6 wreaths; 4 yards left over

4. Sam has 575 photos printed. He puts an equal number of photos into each of 5 albums.

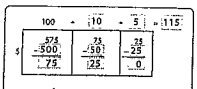
Part A

Write an equation to show the number of photos Sam put in each album. 1 point

Sample answer:
575 ÷ 5 = p

Part B

Complete the model. How many photos did Sam put in each album? 2 points

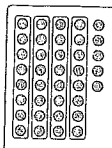


115 photos

5. The cost of a camping trip was $2,484. The cost was divided equally among 6 families. How much money did each family pay? 1 point
   - Ⓐ $224
   - Ⓑ $414
   - Ⓒ $480
   - Ⓓ $481

@Assessment 1of4

6. Linda likes origami. She plans to make 8 origami flowers each day until she has 37 flowers. Draw an array to find how many days it will take Linda to fold all of the flowers. Explain. 2 points



Sample answer:
37 ÷ 8 = 4 R5; Linda can assemble 8 flowers a day for 4 days, and she will fold 5 flowers the 5th day.

7. Draw lines to match the expression to the estimated quotient. 1 point

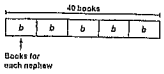
530 ÷ 9	About 100
1,530 ÷ 3	About 60
782 ÷ 8	About 80
475 ÷ 6	About 500

8. There are 4,200 beads in a box. There are 6 bags of beads in each box. If each bag has the same number of beads, how many beads are in each bag? 1 point

700 beads

9. Choose Yes or No to tell if the remainder is 3. 1 point
   - 9a. 52 ÷ 6 = 8 R2 ○ Yes ● No
   - 9b. 351 ÷ 6 = 58 R3 ● Yes ○ No
   - 9c. 1,348 ÷ 7 = 192 R3 ○ Yes ● No
   - 9d. 2,699 ÷ 8 = 337 R7 ● Yes ○ No

10. Mario has 40 books and 5 nephews. He gives the same number of books to each nephew. Which equation shows how to find the number, b, of books Mario gives each nephew? 1 point



   - Ⓐ 40 + 5 = b
   - Ⓒ 40 − 5 = b
   - Ⓑ 40 × 5 = b
   - Ⓓ 40 ÷ 5 = b

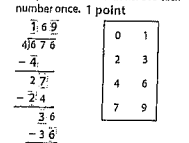
11. The distance from Columbus to Lexington is about 200 miles. Mrs. Potter's goal is to drive to Lexington in 4 hours. How many miles does she need to drive each hour to meet her goal? 1 point

50 miles

@Assessment 2of4

12. There are 331 cars parked on 4 different floors of the parking garage. There are about the same number of cars parked on each floor. Select all the statements that are reasonable estimates for the number of cars parked on each floor. 1 point
   - ☐ 40 cars, because 331 ÷ 4 is about 160 ÷ 4.
   - ☑ 80 cars, because 331 ÷ 4 is about 320 ÷ 4.
   - ☐ 40 cars, because 331 ÷ 4 is about 360 ÷ 9.
   - ☑ 100 cars, because 331 ÷ 4 is about 300 ÷ 3.
   - ☐ 60 cars, because 331 ÷ 4 is about 360 ÷ 6.

13. Use an algorithm to find the quotient. Choose numbers from the box to complete the calculations. Use each number once. 1 point



0	1
2	3
4	6
7	9

14. Jerry needs 1,800 pennies to fill 6 jars. He will put an equal number of pennies in each jar. How many pennies will Jerry put in each jar? What basic fact did you use? 2 points

300 pennies; 18 ÷ 6 = 3

15. The fourth graders are going to the theater to watch the movie version of the book they all have read.

Group	Number of People
Mr. Blaine's Class	27
Mrs. Hatch's Class	28
Miss Rupert's Class	31
Mr. Lang's Class	29
Teachers and Chaperones	11

Each row seats 9 people. How many rows will be needed to seat everyone? 1 point

14 rows

16. Tanji was asked to find the quotient for 88 ÷ 4. He drew an array and used the Distributive Property to find the quotient. Show Tanji's work. 2 points

88 ÷ 4 =
= (80 ÷ 8) ÷ 4
= (80 ÷ 4) + (8 ÷ 4)
= 20 + 2
= 22

@Assessment 3of4

17. The Comic Depot gives customers a free comic book when they purchase 9 comic books. How many free comic books can Marci get if she buys 68 comics? How many more comic books does she need to buy to get her next free comic book? 2 points

7 free comic books; 4 more comic books

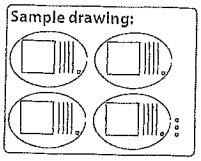
18. Estimate 347 ÷ 6. Explain how you can use multiplication to estimate the quotient. 2 points

Sample answer:
6 × 6 = 36 and
6 × 60 = 360. So,
347 ÷ 6 is about 60.

19. Chi has 144 books to place equally on 6 bookshelves. Which equation can you use to find how many books will be on each bookshelf? 1 point
   - Ⓐ 144 × 6 = b
   - Ⓒ 144 ÷ 6 = b
   - Ⓑ 144 ÷ 6 = b
   - Ⓓ 144 − 6 = b

20. Draw a picture to explain why 567 ÷ 4 = 141 R3. 1 point

Sample drawing:



21. The 5 fourth-grade classes at Brown Elementary raised a total of $2,462 to purchase playground equipment. Write and solve an equation that shows one way to estimate the amount raised by each class. 2 points

Sample answer:
$2,500 ÷ 5 = n;
n = $500

22. Draw lines to match the equation to the correct missing number. 1 point

3, _00 ÷ 4 = 800	7
805 ÷ _ = 115	6
420 ÷ 7 = _0	2
90 ÷ 8 = 1_ R2	1

23. Mr. Draper uses 8 nails to secure each board of a fence. If there are 500 nails in a box, about how many boards will Mr. Draper be able to secure? Use compatible numbers to estimate the number of boards. 1 point

Sample answer:
480 ÷ 8 = 60; about 60 boards

@Assessment 4of4

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about 450 ÷ 3.

☐ 200 students, because 472 ÷ 6 is about 1,200 ÷ 6 = 200.

13. Use an algorithm to find the quotient. Choose numbers from the box to complete the calculations. Use each number once. 1 point

$$\begin{array}{r} 1\,56 \\ 3\overline{)468} \\ -3 \\ \hline 16 \\ -15 \\ \hline 18 \\ -18 \\ \hline 0 \end{array}$$

0	1
1	3
5	6
8	8

14. Carla needs 1,600 beads to make 8 necklaces. She divides the beads equally. How many beads does Carla use for each necklace? What basic fact did you use? 2 points

200 beads; 16 ÷ 8 = 2

groups will be needed so everyone can see the exhibit? 1 point

16 groups

16. Albert was asked to find the quotient for 63 ÷ 3. He drew an array and used the Distributive Property to find the quotient. Show Albert's work. 2 points

63 ÷ 3 =
= (60 + 3) ÷ 3
= (60 ÷ 3) + (3 ÷ 3)
= 20 + 1
= 21

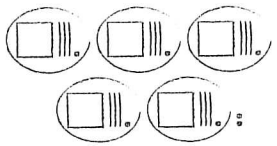
Sample answer: 5 × 5 = 25 and 5 × 50 = 250. So, 257 ÷ 5 is about 50.

19. Alex has 128 photos of his friends to display equally in 4 photo albums. Which equation can you use to find how many photos will be in each album? 1 point

Ⓐ 128 − 4 = *p* Ⓒ 128 ÷ 4 = *p*
Ⓑ 128 + 4 = *p* Ⓓ 128 × 4 = *p*

20. Draw a picture to explain why 657 ÷ 5 = 131 R2. 1 point

Sample drawing:



4, 00 ÷ 6 = 800 — 6
675 ÷ ☐ = 135 — 3
360 ÷ 6 = ☐ 0 — 8
98 ÷ 5 = 19 R ☐ — 5

23. Holly uses 7 sheets of tissue paper to make one flower. If she bought a package with 500 sheets of tissue paper, about how many flowers will Holly be able to make? Use compatible numbers to estimate the number of flowers. 1 point

Sample answer:
490 ÷ 7 = 70; About 70 tissue flowers

RTI Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS	Item	Standard	DOK	MDIS	Item	Standard	DOK	MDIS
1	4.NBT.B.6	1	G43	8	4.NBT.B.6	1	G41, G56	16	4.NBT.B.6	3	G52
2	4.NBT.B.6, MP.4	2	G41, G56	9	4.NBT.B.6	1	G51, G53, G54, G56	17	4.OA.A.3, 4.NBT.B.6	1	G51, G53
3	4.NBT.B.6	1	G51, G53	10	4.NBT.B.6	2	J10	18	4.NBT.B.6	2	G43
4A	4.NBT.B.6	1	G54	11	4.NBT.B.6	1	G54	19	4.NBT.B.6	1	G54
4B	4.NBT.B.6	2	G54	12	4.NBT.B.6	1	G43	20	4.NBT.B.6	2	G54
5	4.NBT.B.6	1	G56	13	4.NBT.B.6	2	G54	21	4.NBT.B.6	2	G56
6	4.NBT.B.6	3	G51	14	4.NBT.B.6	2	G41	22	4.NBT.B.6	2	G53, G54, G56
7	4.NBT.B.6	1	G43	15	4.OA.A.3, 4.NBT.B.6	1	G54	23	4.NBT.B.6	1	G43

4.OA.A.1

Choose the correct phrase from the box to complete each statement.

more than	times as many as

100 is 4 [ ] 25.

72 is 8 [ ] 64.

85 is 15 [ ] 70.

88 is 4 [ ] 22.

4.OA.A.2

Marvin wrote a list of expressions and a list of solutions.
Drag the correct solution to match the expression.

6	8	32	132

Expression	Solution
6×22	
64 is 8 times as many as w	
4 times as many as 8	
20 times as many as p is 120	

4.OA.A.2

Paul raised $48 for a local charity. Sara raised $8.
How many times as much money did Paul raise than Sara?

- A. 384 times
- B. 56 times
- C. 8 times
- D. 6 times

4.OA.A.3

There are 35 members in a music club. All of the members, except 4, went to a concert.
What was the total cost, t, if the concert tickets were $8 each?
What is the hidden question and the solution?

○ A.

How many members are in the club? t = $32

○ B.

How many members are in the club? t = $280

○ C.

How many members went to the concert? t = $248

○ D.

How many members went to the concert? t = $280

4.OA.A.3

Brianna spent $65 on necklaces and bracelets at a crafts fair.
She spent $23 on bracelets and the rest on necklaces.
If the necklaces all cost the same and Brianna bought 3, how much did each necklace cost?

- A. $14
- B. $13
- C. $24
- D. $15

4.OA.A.3

How much does it cost for 2 small one-topping pizzas and 3 large two-topping pizzas?
Enter your answer in the box.

Size	One Topping	Two Toppings
Small	$6	$8
Medium	$8	$10
Large	$11	$13

$

4.OA.B.4 (all questions)

Drew wrote 4 sets of numbers. Which sets show only multiples of 7?

1, 7 Choose..

7, 14, 21, 28 Choose..

7, 35, 70, 77 Choose..

1, 7, 14, 35 Choose..

Which statement is true?

- A. The only factors of 4 are 4 and 1.
- B. The only factors of 6 are 6 and 1.
- C. The only factors of 7 are 7 and 1.
- D. The only factors of 9 are 9 and 1.

Choose the correct words to complete each statement.

prime | composite

21 is a		number.
23 is a		number.
29 is a		number.
31 is a		number.

Levi is learning about multiples and factors. He wrote 3 multiples and 3 factors for 27.

Part A

Which set shows only multiples of 27?

- A. 1, 9, 27
- B. 9, 27, 81, 243
- C. 3, 9, 27
- D. 27, 81, 243

Part B

Which set shows only factors of 27?

- A. 1, 9, 27
- B. 1, 3, 27, 81
- C. 9, 18, 27
- D. 1, 3, 6, 27

Kym wrote a list of factors and a list of multiples.
Drag the numbers to match the multiples with the factors.

33 16 48 69

Factors	Multiples
4	
6	
11	
23	

Tamara says factors and multiples are related.
Complete the statement about the equation $5 \times 8 = 40$.

5 and 8 are [Choose...] of 40 and 40 is a [Choose...] of 5 and 8.

Which lists all the factors of 16?

- A. 1, 2, 4, 8, 16
- B. 1, 2, 8, 16
- C. 1, 4, 16
- D. 2, 8

Drag the numbers to the correct box to show the factors of 24 and 42.
Numbers may be used once, more than once, or not at all.

2	3	6	8	9	14

Factors of 24	Factors of 42

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Assessment

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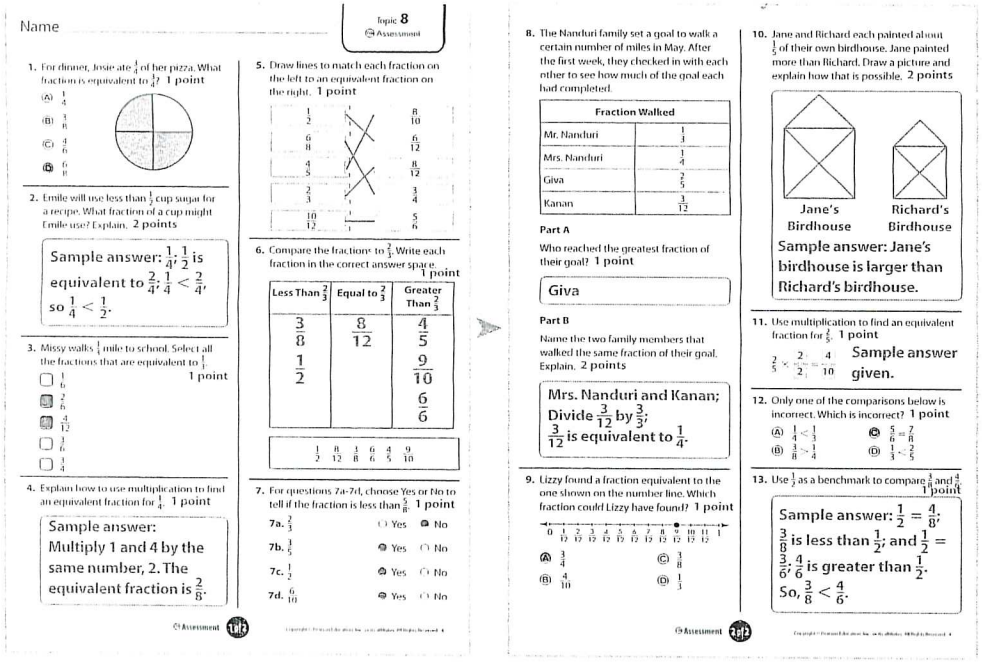

Name

Topic 8 Assessment

1. For dinner, Josie ate $\frac{1}{4}$ of her pizza. What fraction is equivalent to $\frac{1}{4}$? 1 point
   - (A) $\frac{1}{4}$
   - (B) $\frac{3}{8}$
   - (C) $\frac{4}{6}$
   - (D) $\frac{6}{8}$

2. Emile will use less than $\frac{1}{2}$ cup sugar for a recipe. What fraction of a cup might Emile use? Explain. 2 points

   Sample answer: $\frac{1}{4}$, $\frac{1}{2}$ is equivalent to $\frac{2}{4}$, $\frac{1}{4} < \frac{2}{4}$, so $\frac{1}{4} < \frac{1}{2}$.

3. Missy walks $\frac{1}{2}$ mile to school. Select all the fractions that are equivalent to $\frac{1}{2}$. 1 point
   - ☐ $\frac{1}{6}$
   - ☑ $\frac{2}{6}$
   - ☑ $\frac{4}{12}$
   - ☐ $\frac{3}{6}$
   - ☐ $\frac{1}{4}$

4. Explain how to use multiplication to find an equivalent fraction for $\frac{1}{4}$. 1 point

   Sample answer: Multiply 1 and 4 by the same number, 2. The equivalent fraction is $\frac{2}{8}$.

5. Draw lines to match each fraction on the left to an equivalent fraction on the right. 1 point

   $\frac{1}{2}$, $\frac{6}{8}$, $\frac{4}{5}$, $\frac{2}{3}$, $\frac{10}{12}$ — $\frac{8}{10}$, $\frac{6}{12}$, $\frac{8}{12}$, $\frac{3}{4}$, $\frac{5}{6}$

6. Compare the fractions to $\frac{2}{3}$. Write each fraction in the correct answer space. 1 point

Less Than $\frac{2}{3}$	Equal to $\frac{2}{3}$	Greater Than $\frac{2}{3}$
$\frac{3}{8}$	$\frac{8}{12}$	$\frac{4}{5}$
$\frac{1}{2}$		$\frac{9}{10}$
		$\frac{6}{6}$

$\frac{1}{2}$ $\frac{8}{12}$ $\frac{1}{8}$ $\frac{6}{6}$ $\frac{4}{5}$ $\frac{9}{10}$

7. For questions 7a–7d, choose Yes or No to tell if the fraction is less than $\frac{5}{8}$. 1 point
   - 7a. $\frac{2}{3}$ ○ Yes ● No
   - 7b. $\frac{3}{5}$ ● Yes ○ No
   - 7c. $\frac{1}{2}$ ● Yes ○ No
   - 7d. $\frac{6}{10}$ ● Yes ○ No

Assessment Part 1

8. The Nanduri family set a goal to walk a certain number of miles in May. After the first week, they checked in with each other to see how much of the goal each had completed.

Fraction Walked	
Mr. Nanduri	$\frac{1}{3}$
Mrs. Nanduri	$\frac{1}{4}$
Giva	$\frac{2}{5}$
Kanan	$\frac{3}{12}$

   Part A

   Who reached the greatest fraction of their goal? 1 point

   Giva

   Part B

   Name the two family members that walked the same fraction of their goal. Explain. 2 points

   Mrs. Nanduri and Kanan; Divide $\frac{3}{12}$ by $\frac{3}{3}$; $\frac{3}{12}$ is equivalent to $\frac{1}{4}$.

9. Lizzy found a fraction equivalent to the one shown on the number line. Which fraction could Lizzy have found? 1 point

   - (A) $\frac{3}{4}$
   - (B) $\frac{4}{10}$
   - (C) $\frac{3}{8}$
   - (D) $\frac{1}{3}$

10. Jane and Richard each painted about $\frac{1}{2}$ of their own birdhouse. Jane painted more than Richard. Draw a picture and explain how that is possible. 2 points

    Jane's Birdhouse — Richard's Birdhouse

    Sample answer: Jane's birdhouse is larger than Richard's birdhouse.

11. Use multiplication to find an equivalent fraction for $\frac{2}{5}$. 1 point

    $\frac{2}{5} \times \frac{2}{2} = \frac{4}{10}$ Sample answer given.

12. Only one of the comparisons below is incorrect. Which is incorrect? 1 point
    - (A) $\frac{1}{4} < \frac{1}{3}$
    - (B) $\frac{3}{8} > \frac{1}{4}$
    - (C) $\frac{5}{6} = \frac{7}{8}$
    - (D) $\frac{1}{3} < \frac{2}{5}$

13. Use $\frac{1}{2}$ as a benchmark to compare $\frac{3}{8}$ and $\frac{4}{6}$. 1 point

    Sample answer: $\frac{1}{2} = \frac{4}{8}$. $\frac{3}{8}$ is less than $\frac{1}{2}$; and $\frac{1}{2} = \frac{3}{6}$; $\frac{4}{6}$ is greater than $\frac{1}{2}$. So, $\frac{3}{8} < \frac{4}{6}$.

Assessment Part 2

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1	1	Correct choice selected
2	2	Correct answer and explanation
	1	Correct answer or explanation
3	1	All correct choices selected
4	1	Correct explanation

RTI Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.NF.A.1	1	H9
2	4.NF.A.2	2	H11
3	4.NF.A.1	1	H16
4	4.NF.A.1	1	H16
5	4.NF.A.1	1	H16
6	4.NF.A.2	1	H11
7	4.NF.A.2	1	H11
8A	4.NF.A.2	1	H11
8B	4.NF.A.1, MP.3	2	H16
9	4.NF.A.1	1	H10, H16
10	4.NF.A.2	3	H11
11	4.NF.A.1	1	H16
12	4.NF.A.2	1	H11
13	4.NF.A.2	1	H11

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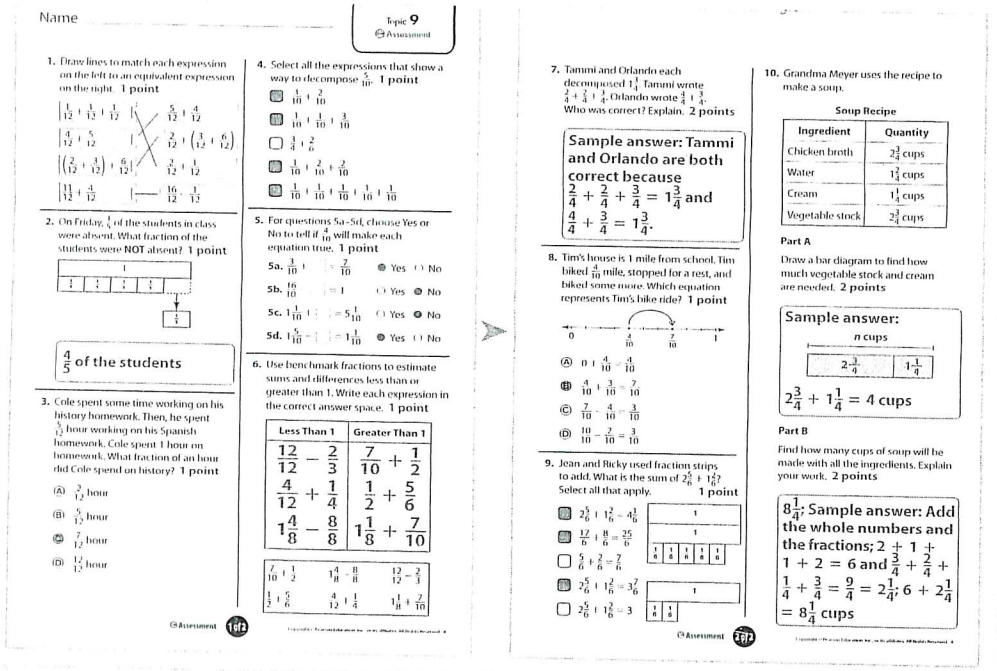
Assessment

Topic Assessment Masters



Name _____ Topic 9 Assessment

1. Draw lines to match each expression on the left to an equivalent expression on the right. 1 point

$\frac{1}{12} + \frac{1}{12} + \frac{1}{12}$ — $\frac{5}{12} + \frac{4}{12}$

$\frac{4}{12} + \frac{5}{12}$ — $\frac{2}{12} + \left(\frac{3}{12} + \frac{6}{12}\right)$

$\left(\frac{2}{12} + \frac{3}{12}\right) + \frac{6}{12}$ — $\frac{2}{12} + \frac{1}{12}$

$\frac{11}{12} + \frac{1}{12}$ — $\frac{16}{12} - \frac{3}{12}$

2. On Friday, $\frac{1}{5}$ of the students in class were absent. What fraction of the students were NOT absent? 1 point

$\frac{4}{5}$ of the students

3. Cole spent some time working on his history homework. Then, he spent $\frac{5}{12}$ hour working on his Spanish homework. Cole spent 1 hour on homework. What fraction of an hour did Cole spend on history? 1 point

(A) $\frac{2}{12}$ hour
(B) $\frac{5}{12}$ hour
(C) $\frac{7}{12}$ hour
(D) $\frac{12}{12}$ hour

4. Select all the expressions that show a way to decompose $\frac{5}{10}$. 1 point

- [x] $\frac{1}{10} + \frac{2}{10}$
- [x] $\frac{1}{10} + \frac{1}{10} + \frac{3}{10}$
- [ ] $\frac{3}{4} + \frac{2}{6}$
- [x] $\frac{3}{10} + \frac{2}{10} + \frac{2}{10}$
- [x] $\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10}$

5. For questions 5a–5d, choose Yes or No to tell if $\frac{4}{10}$ will make each equation true. 1 point

5a. $\frac{3}{10} + \square = \frac{7}{10}$ — Yes / No
5b. $\frac{16}{10} - \square = 1$ — Yes / No
5c. $1\frac{1}{10} + \square = 5\frac{1}{10}$ — Yes / No
5d. $1\frac{5}{10} - \square = 1\frac{1}{10}$ — Yes / No

6. Use benchmark fractions to estimate sums and differences less than or greater than 1. Write each expression in the correct answer space. 1 point

Less Than 1	Greater Than 1
$\frac{12}{12} - \frac{2}{3}$	$\frac{7}{10} + \frac{1}{2}$
$\frac{4}{12} + \frac{1}{4}$	$\frac{1}{2} + \frac{5}{6}$
$1\frac{4}{8} - \frac{8}{8}$	$1\frac{1}{8} + \frac{7}{10}$

$\frac{7}{10} + \frac{1}{2}$ $1\frac{4}{8} - \frac{8}{8}$ $\frac{12}{12} - \frac{2}{3}$
$\frac{1}{3} + \frac{5}{6}$ $\frac{4}{12} + \frac{1}{4}$ $1\frac{1}{8} + \frac{7}{10}$

Assessment 1 of 2

7. Tammi and Orlando each decomposed $1\frac{3}{4}$. Tammi wrote $\frac{2}{4} + \frac{2}{4} + \frac{3}{4}$. Orlando wrote $\frac{4}{4} + \frac{3}{4}$. Who was correct? Explain. 2 points

Sample answer: Tammi and Orlando are both correct because $\frac{2}{4} + \frac{2}{4} + \frac{3}{4} = 1\frac{3}{4}$ and $\frac{4}{4} + \frac{3}{4} = 1\frac{3}{4}$.

8. Tim's house is 1 mile from school. Tim biked $\frac{4}{10}$ mile, stopped for a rest, and biked some more. Which equation represents Tim's bike ride? 1 point

(A) $n + \frac{4}{10} = \frac{4}{10}$
(B) $\frac{4}{10} + \frac{3}{10} = \frac{7}{10}$
(C) $\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$
(D) $\frac{10}{10} - \frac{7}{10} = \frac{3}{10}$

9. Jean and Ricky used fraction strips to add. What is the sum of $2\frac{5}{6} + 1\frac{2}{6}$? Select all that apply. 1 point

- [x] $2\frac{5}{6} + 1\frac{2}{6} = 4\frac{1}{6}$
- [x] $\frac{12}{6} + \frac{8}{6} = \frac{25}{6}$
- [ ] $\frac{5}{6} + \frac{2}{6} = \frac{7}{6}$
- [x] $2\frac{5}{6} + 1\frac{2}{6} = 3\frac{7}{6}$
- [ ] $2\frac{5}{6} + 1\frac{2}{6} = 3$

10. Grandma Meyer uses the recipe to make a soup.

Soup Recipe

Ingredient	Quantity
Chicken broth	$2\frac{3}{4}$ cups
Water	$1\frac{3}{4}$ cups
Cream	$1\frac{1}{4}$ cups
Vegetable stock	$2\frac{3}{4}$ cups

Part A

Draw a bar diagram to find how much vegetable stock and cream are needed. 2 points

Sample answer:

$2\frac{3}{4} + 1\frac{1}{4} = 4$ cups

Part B

Find how many cups of soup will be made with all the ingredients. Explain your work. 2 points

$8\frac{1}{4}$; Sample answer: Add the whole numbers and the fractions; $2 + 1 + 1 + 2 = 6$ and $\frac{3}{4} + \frac{2}{4} + \frac{1}{4} + \frac{3}{4} = \frac{9}{4} = 2\frac{1}{4}$; $6 + 2\frac{1}{4} = 8\frac{1}{4}$ cups

Assessment 2 of 2

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1	1	All matches correct
2	1	Correct answer
3	1	Correct choice selected

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.NF.B.3b	1	H38
2	4.NF.B.3a	1	H39
3	4.NF.B.3a	1	H38, H39, H40
4	4.NF.B.3b	1	H38
5	4.NF.B.3a, 4.NF.B.3c	1	H38, H39, H40
6	4.NF.B.3a, 4.NF.B.3c	2	H85
7	4.NF.B.3b	2	H38
8	4.NF.B.3a, 4.NF.B.3d, MP.4	1	H41
9	4.NF.B.3c	1	H45
10A	4.NF.B.3c	2	H45
10B	4.NF.B.3c	3	H45

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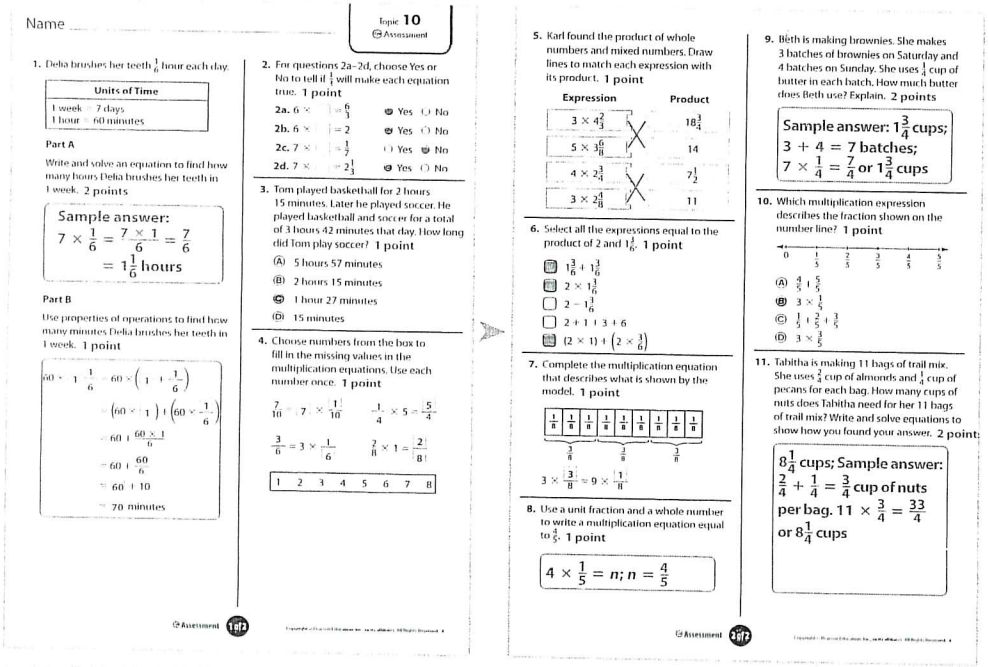
Assessment

Topic Assessment Masters



Name _____ Topic 10 Assessment

1. Delia brushes her teeth $\frac{1}{6}$ hour each day.

Units of Time
1 week = 7 days
1 hour = 60 minutes

Part A

Write and solve an equation to find how many hours Delia brushes her teeth in 1 week. 2 points

Sample answer:
$7 \times \frac{1}{6} = \frac{7 \times 1}{6} = \frac{7}{6}$
$= 1\frac{1}{6}$ hours

Part B

Use properties of operations to find how many minutes Delia brushes her teeth in 1 week. 1 point

$60 \times 1\frac{1}{6} = 60 \times \left(1 + \frac{1}{6}\right)$
$= \left(60 \times 1\right) + \left(60 \times \frac{1}{6}\right)$
$= 60 + \frac{60 \times 1}{6}$
$= 60 + \frac{60}{6}$
$= 60 + 10$
$= 70$ minutes

2. For questions 2a–2d, choose Yes or No to tell if $\frac{1}{3}$ will make each equation true. 1 point

2a. $6 \times \square = \frac{6}{3}$ ● Yes ○ No
2b. $6 \times \square = 2$ ● Yes ○ No
2c. $7 \times \square = \frac{1}{7}$ ○ Yes ● No
2d. $7 \times \square = 2\frac{1}{3}$ ● Yes ○ No

3. Tom played basketball for 2 hours 15 minutes. Later he played soccer. He played basketball and soccer for a total of 3 hours 42 minutes that day. How long did Tom play soccer? 1 point

Ⓐ 5 hours 57 minutes
Ⓑ 2 hours 15 minutes
● 1 hour 27 minutes
Ⓓ 15 minutes

4. Choose numbers from the box to fill in the missing values in the multiplication equations. Use each number once. 1 point

$\frac{7}{10} = 7 \times \frac{1}{10}$ $\frac{1}{4} \times 5 = \frac{5}{4}$
$\frac{3}{6} = 3 \times \frac{1}{6}$ $\frac{7}{8} \times 1 = \frac{7}{8}$

1	2	3	4	5	6	7	8

Assessment 1 of 2

5. Karl found the product of whole numbers and mixed numbers. Draw lines to match each expression with its product. 1 point

Expression	Product
$3 \times 4\frac{2}{3}$	$18\frac{3}{4}$
$5 \times 3\frac{6}{8}$	14
$4 \times 2\frac{3}{4}$	$7\frac{1}{2}$
$3 \times 2\frac{4}{8}$	11

6. Select all the expressions equal to the product of 2 and $1\frac{1}{6}$. 1 point

☑ $1\frac{3}{6} + 1\frac{3}{6}$
☑ $2 \times 1\frac{1}{6}$
☐ $2 - 1\frac{1}{6}$
☐ $2 + 1 + 3 + 6$
☑ $(2 \times 1) + \left(2 \times \frac{1}{6}\right)$

7. Complete the multiplication equation that describes what is shown by the model. 1 point

$3 \times \frac{3}{8} = 9 \times \frac{1}{8}$

8. Use a unit fraction and a whole number to write a multiplication equation equal to $\frac{4}{5}$. 1 point

$4 \times \frac{1}{5} = n; n = \frac{4}{5}$

9. Beth is making brownies. She makes 3 batches of brownies on Saturday and 4 batches on Sunday. She uses $\frac{1}{4}$ cup of butter in each batch. How much butter does Beth use? Explain. 2 points

Sample answer: $1\frac{3}{4}$ cups;
$3 + 4 = 7$ batches;
$7 \times \frac{1}{4} = \frac{7}{4}$ or $1\frac{3}{4}$ cups

10. Which multiplication expression describes the fraction shown on the number line? 1 point

Ⓐ $\frac{4}{5} + \frac{5}{5}$
● $3 \times \frac{1}{5}$
Ⓒ $\frac{1}{5} + \frac{2}{5} + \frac{3}{5}$
Ⓓ $3 \times \frac{3}{5}$

11. Tabitha is making 11 bags of trail mix. She uses $\frac{2}{4}$ cup of almonds and $\frac{1}{4}$ cup of pecans for each bag. How many cups of nuts does Tabitha need for her 11 bags of trail mix? Write and solve equations to show how you found your answer. 2 points

$8\frac{1}{4}$ cups; Sample answer:
$\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$ cup of nuts per bag. $11 \times \frac{3}{4} = \frac{33}{4}$ or $8\frac{1}{4}$ cups

Assessment 2 of 2

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1A	2	Correct equation and answer
	1	Correct equation or answer
1B	1	All numbers correct
2	1	All correct choices selected

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1A	4.NF.B.4a, 4.MD.A.2	2	H47
1B	4.NF.B.4c, 4.MD.A.2	2	H47
2	4.NF.B.4a	1	H47
3	4.MD.A.2	1	I31
4	4.NF.B.4a	1	H47
5	4.NF.B.4b	1	H47
6	4.NF.B.4b	1	H45, H47
7	4.NF.B.4b	1	H47
8	4.NF.B.4a	2	H47
9	4.NF.B.4c	3	H47
10	4.NF.B.4a	1	H47
11	4.NF.B.4c, MP.4	3	H38, H47

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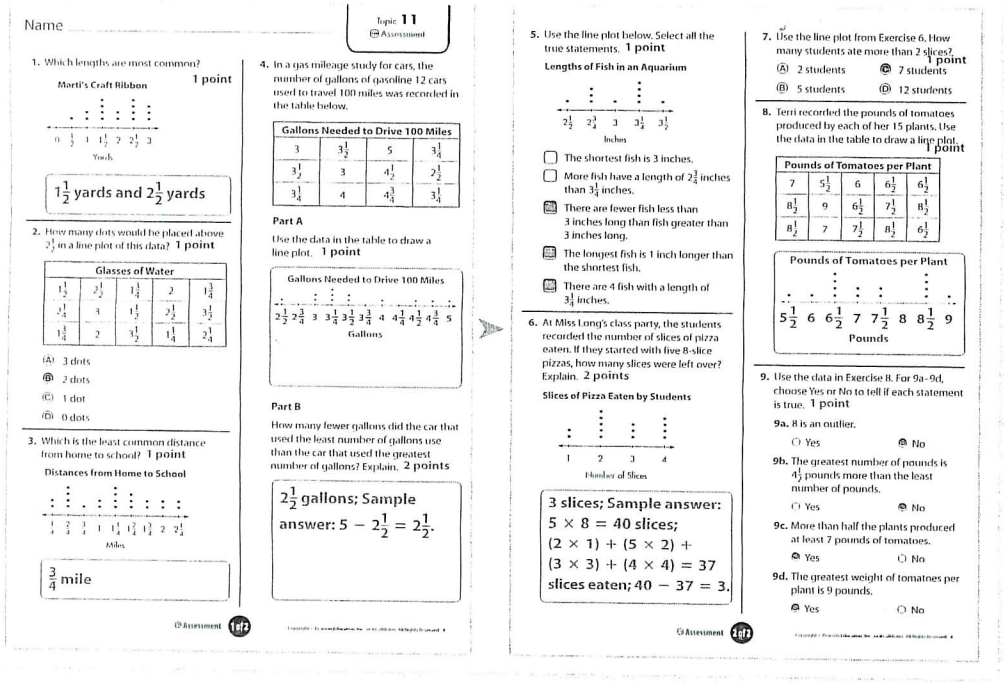
Assessment

Grade 4 Teacher's Edition VOLUME

Topic Assessment Masters



Name _____ Topic 11 Assessment

1. Which lengths are most common? 1 point

Marti's Craft Ribbon

$1\frac{1}{2}$ yards and $2\frac{1}{2}$ yards

2. How many dots would be placed above $2\frac{1}{4}$ in a line plot of this data? 1 point

Glasses of Water				
$1\frac{1}{2}$	$2\frac{1}{2}$	$1\frac{1}{4}$	2	$1\frac{3}{4}$
$2\frac{1}{4}$	3	$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{2}$
$1\frac{3}{4}$	2	$3\frac{1}{2}$	$1\frac{1}{4}$	$2\frac{1}{4}$

(A) 3 dots
(B) 2 dots
(C) 1 dot
(D) 0 dots

3. Which is the least common distance from home to school? 1 point

Distances from Home to School

$\frac{3}{4}$ mile

4. In a gas mileage study for cars, the number of gallons of gasoline 12 cars used to travel 100 miles was recorded in the table below.

Gallons Needed to Drive 100 Miles			
3	$3\frac{1}{2}$	5	$3\frac{1}{4}$
$3\frac{1}{2}$	3	$4\frac{1}{2}$	$2\frac{1}{2}$
$3\frac{1}{4}$	4	$4\frac{3}{4}$	$3\frac{1}{4}$

Part A

Use the data in the table to draw a line plot. 1 point

Part B

How many fewer gallons did the car that used the least number of gallons use than the car that used the greatest number of gallons? Explain. 2 points

$2\frac{1}{2}$ gallons; Sample answer: $5 - 2\frac{1}{2} = 2\frac{1}{2}$.

5. Use the line plot below. Select all the true statements. 1 point

Lengths of Fish in an Aquarium

- ☐ The shortest fish is 3 inches.
- ☐ More fish have a length of $2\frac{3}{4}$ inches than $3\frac{1}{4}$ inches.
- ☑ There are fewer fish less than 3 inches long than fish greater than 3 inches long.
- ☑ The longest fish is 1 inch longer than the shortest fish.
- ☑ There are 4 fish with a length of $3\frac{1}{4}$ inches.

6. At Miss Long's class party, the students recorded the number of slices of pizza eaten. If they started with five 8-slice pizzas, how many slices were left over? Explain. 2 points

Slices of Pizza Eaten by Students

3 slices; Sample answer: $5 \times 8 = 40$ slices; $(2 \times 1) + (5 \times 2) + (3 \times 3) + (4 \times 4) = 37$ slices eaten; $40 - 37 = 3$.

7. Use the line plot from Exercise 6. How many students ate more than 2 slices? 1 point

(A) 2 students (C) 7 students
(B) 5 students (D) 12 students

8. Terri recorded the pounds of tomatoes produced by each of her 15 plants. Use the data in the table to draw a line plot. 1 point

Pounds of Tomatoes per Plant				
7	$5\frac{1}{2}$	6	$6\frac{1}{2}$	$6\frac{1}{2}$
$8\frac{1}{2}$	9	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$
$8\frac{1}{2}$	7	$7\frac{1}{2}$	$8\frac{1}{2}$	$6\frac{1}{2}$

9. Use the data in Exercise 8. For 9a–9d, choose Yes or No to tell if each statement is true. 1 point

9a. 8 is an outlier. (A) Yes (B) No

9b. The greatest number of pounds is $4\frac{1}{2}$ pounds more than the least number of pounds. (A) Yes (B) No

9c. More than half the plants produced at least 7 pounds of tomatoes. (B) Yes (A) No

9d. The greatest weight of tomatoes per plant is 9 pounds. (B) Yes (A) No

Assessment

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1	1	Correct answer
2	1	Correct choice selected
3	1	Correct answer
4A	1	Correct line plot

RtI Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.MD.B.4	1	171
2	4.MD.B.4	1	160, 169, 171
3	4.MD.B.4	1	171
4A	4.MD.B.4	2	160, 169, 171
4B	4.MD.B.4, 4.NF.B.3d	2	H46, 171
5	4.MD.B.4	1	171
6	4.MD.B.4	2	160, 169
7	4.MD.B.4	1	160, 169
8	4.MD.B.4	2	160, 169, 171
9	4.MD.B.4	1	171

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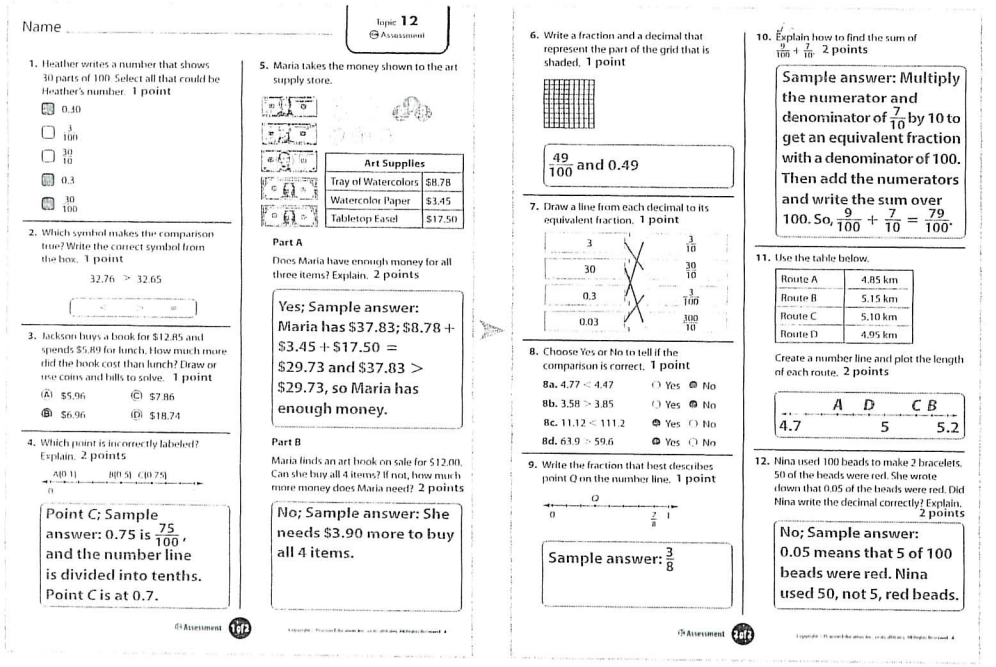
Assessment

Topic Assessment Masters



Name _____ Topic 12 Assessment

1. Heather writes a number that shows 30 parts of 100. Select all that could be Heather's number. 1 point
   - ☑ 0.30
   - ☐ $\frac{1}{100}$
   - ☐ $\frac{30}{10}$
   - ☑ 0.3
   - ☑ $\frac{30}{100}$

2. Which symbol makes the comparison true? Write the correct symbol from the box. 1 point
   32.76 > 32.65
   < > =

3. Jackson buys a book for $12.85 and spends $5.89 for lunch. How much more did the book cost than lunch? Draw or use coins and bills to solve. 1 point
   (A) $5.96 (C) $7.86
   (B) $6.96 (D) $18.74

4. Which point is incorrectly labeled? Explain. 2 points
   A(0.1) B(0.5) C(0.75)
   0 1
   Point C; Sample answer: 0.75 is $\frac{75}{100}$, and the number line is divided into tenths. Point C is at 0.7.

5. Maria takes the money shown to the art supply store.

Art Supplies	
Tray of Watercolors	$8.78
Watercolor Paper	$3.45
Tabletop Easel	$17.50

Part A
Does Maria have enough money for all three items? Explain. 2 points
Yes; Sample answer: Maria has $37.83; $8.78 + $3.45 + $17.50 = $29.73 and $37.83 > $29.73, so Maria has enough money.

Part B
Maria finds an art book on sale for $12.00. Can she buy all 4 items? If not, how much more money does Maria need? 2 points
No; Sample answer: She needs $3.90 more to buy all 4 items.

Assessment TMF

6. Write a fraction and a decimal that represent the part of the grid that is shaded. 1 point
   $\frac{49}{100}$ and 0.49

7. Draw a line from each decimal to its equivalent fraction. 1 point
   3 — $\frac{3}{10}$
   30 — $\frac{30}{10}$
   0.3 — $\frac{3}{100}$
   0.03 — $\frac{300}{10}$

8. Choose Yes or No to tell if the comparison is correct. 1 point
   8a. 4.77 < 4.47 ○ Yes ● No
   8b. 3.58 > 3.85 ○ Yes ● No
   8c. 11.12 < 111.2 ● Yes ○ No
   8d. 63.9 > 59.6 ● Yes ○ No

9. Write the fraction that best describes point Q on the number line. 1 point
   Q
   0 $\frac{2}{8}$ 1
   Sample answer: $\frac{3}{8}$

10. Explain how to find the sum of $\frac{9}{100} + \frac{7}{10}$. 2 points
    Sample answer: Multiply the numerator and denominator of $\frac{7}{10}$ by 10 to get an equivalent fraction with a denominator of 100. Then add the numerators and write the sum over 100. So, $\frac{9}{100} + \frac{7}{10} = \frac{79}{100}$.

11. Use the table below.

Route A	4.85 km
Route B	5.15 km
Route C	5.10 km
Route D	4.95 km

Create a number line and plot the length of each route. 2 points
A D C B
4.7 5 5.2

12. Nina used 100 beads to make 2 bracelets. 50 of the beads were red. She wrote down that 0.05 of the beads were red. Did Nina write the decimal correctly? Explain. 2 points
    No; Sample answer: 0.05 means that 5 of 100 beads were red. Nina used 50, not 5, red beads.

Assessment TMF

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.NF.C.6	1	H12
2	4.NF.C.7	1	H30
3	4.MD.A.2	1	H15
4	4.NF.C.6	1	H25
5A	4.MD.A.2	2	H15
5B	4.MD.A.2	2	H15
6	4.NF.C.6	1	H12
7	4.NF.C.6	1	H12
8	4.NF.C.7, MP.7	1	H30
9	4.NF.C.6	1	H23
10	4.NF.C.5	2	H12
11	4.NF.C.6	2	H25
12	4.NF.C.6	3	H32

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Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)

Item	Points	Topic Assessment (Student's Edition and Masters)

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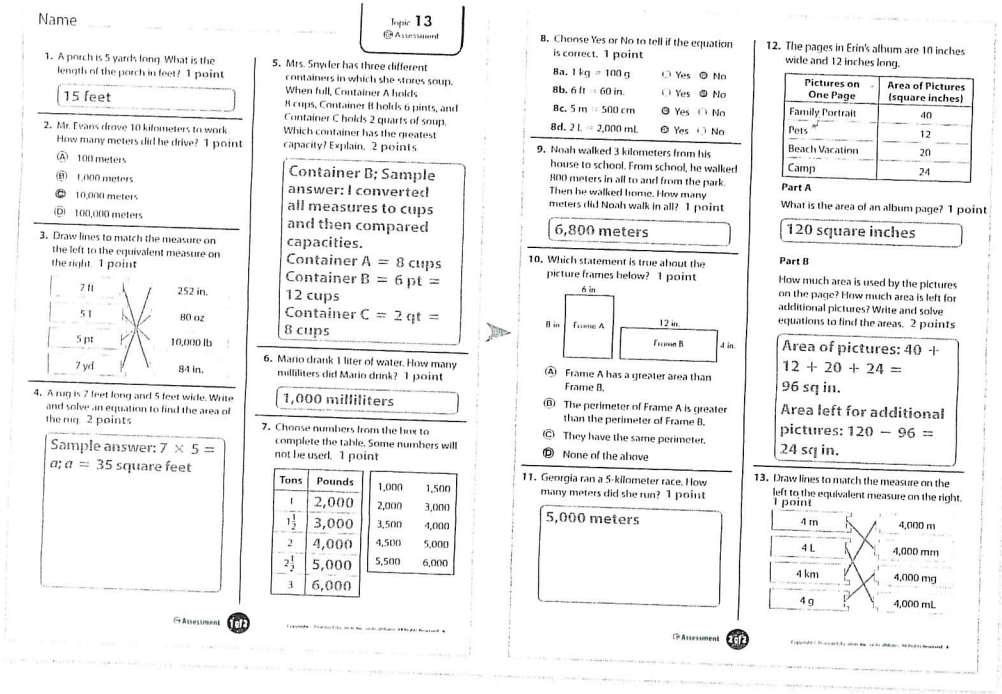

Name

Topic 13 Assessment

1. A porch is 5 yards long. What is the length of the porch in feet? 1 point

15 feet

2. Mr. Evans drove 10 kilometers to work. How many meters did he drive? 1 point

Ⓐ 100 meters
Ⓑ 1,000 meters
Ⓒ 10,000 meters
Ⓓ 100,000 meters

3. Draw lines to match the measure on the left to the equivalent measure on the right. 1 point

7 ft	252 in.
5 T	80 oz
5 pt	10,000 lb
7 yd	84 in.

4. A rug is 7 feet long and 5 feet wide. Write and solve an equation to find the area of the rug. 2 points

Sample answer: $7 \times 5 = a$; $a = 35$ square feet

5. Mrs. Snyder has three different containers in which she stores soup. When full, Container A holds 8 cups, Container B holds 6 pints, and Container C holds 2 quarts of soup. Which container has the greatest capacity? Explain. 2 points

Container B; Sample answer: I converted all measures to cups and then compared capacities.
Container A = 8 cups
Container B = 6 pt = 12 cups
Container C = 2 qt = 8 cups

6. Mario drank 1 liter of water. How many milliliters did Mario drink? 1 point

1,000 milliliters

7. Choose numbers from the box to complete the table. Some numbers will not be used. 1 point

Tons	Pounds
1	2,000
$1\frac{1}{2}$	3,000
2	4,000
$2\frac{1}{2}$	5,000
3	6,000

1,000	1,500
2,000	3,000
3,500	4,000
4,500	5,000
5,500	6,000

Assessment 1 of 2

8. Choose Yes or No to tell if the equation is correct. 1 point

8a. 1 kg = 100 g — ○ Yes ● No
8b. 6 ft = 60 in. — ○ Yes ● No
8c. 5 m = 500 cm — ● Yes ○ No
8d. 2 L = 2,000 mL — ● Yes ○ No

9. Noah walked 3 kilometers from his house to school. From school, he walked 800 meters in all to and from the park. Then he walked home. How many meters did Noah walk in all? 1 point

6,800 meters

10. Which statement is true about the picture frames below? 1 point

Frame A: 6 in. by 8 in.
Frame B: 12 in. by 4 in.

Ⓐ Frame A has a greater area than Frame B.
Ⓑ The perimeter of Frame A is greater than the perimeter of Frame B.
Ⓒ They have the same perimeter.
Ⓓ None of the above

11. Georgia ran a 5-kilometer race. How many meters did she run? 1 point

5,000 meters

12. The pages in Erin's album are 10 inches wide and 12 inches long.

Pictures on One Page	Area of Pictures (square inches)
Family Portrait	40
Pets	12
Beach Vacation	20
Camp	24

Part A

What is the area of an album page? 1 point

120 square inches

Part B

How much area is used by the pictures on the page? How much area is left for additional pictures? Write and solve equations to find the areas. 2 points

Area of pictures: $40 + 12 + 20 + 24 = 96$ sq in.

Area left for additional pictures: $120 - 96 = 24$ sq in.

13. Draw lines to match the measure on the left to the equivalent measure on the right. 1 point

4 m	4,000 m
4 L	4,000 mm
4 km	4,000 mg
4 g	4,000 mL

Assessment 1 of 2

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1	1	Correct answer
2	1	Correct choice selected
3	1	All matches correct
4	2	Correct equation and answer
	1	Correct equation or answer
5	2	Correct answer and explanation
	1	Correct answer or explanation

RtI

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.MD.A.1	1	132, 170
2	4.MD.A.1, 4.MD.A.2	1	125, 135, 170
3	4.MD.A.1	1	132, 133, 134, 170
4	4.MD.A.3	1	145
5	4.MD.A.1, 4.MD.A.2	2	133, 170
6	4.MD.A.1, 4.MD.A.2	1	135, 170
7	4.MD.A.1	1	134, 170
8	4.MD.A.1	1	123, 125, 127, 132, 135, 170
9	4.MD.A.1, 4.MD.A.2	2	123, 135, 170
10	4.MD.A.3	2	144, 145
11	4.MD.A.1, 4.MD.A.2	1	123, 135, 170
12A	4.MD.A.3	1	145
12B	4.MD.A.3, MP.6	3	145
13	4.MD.A.1	1	123, 125, 127, 135, 170

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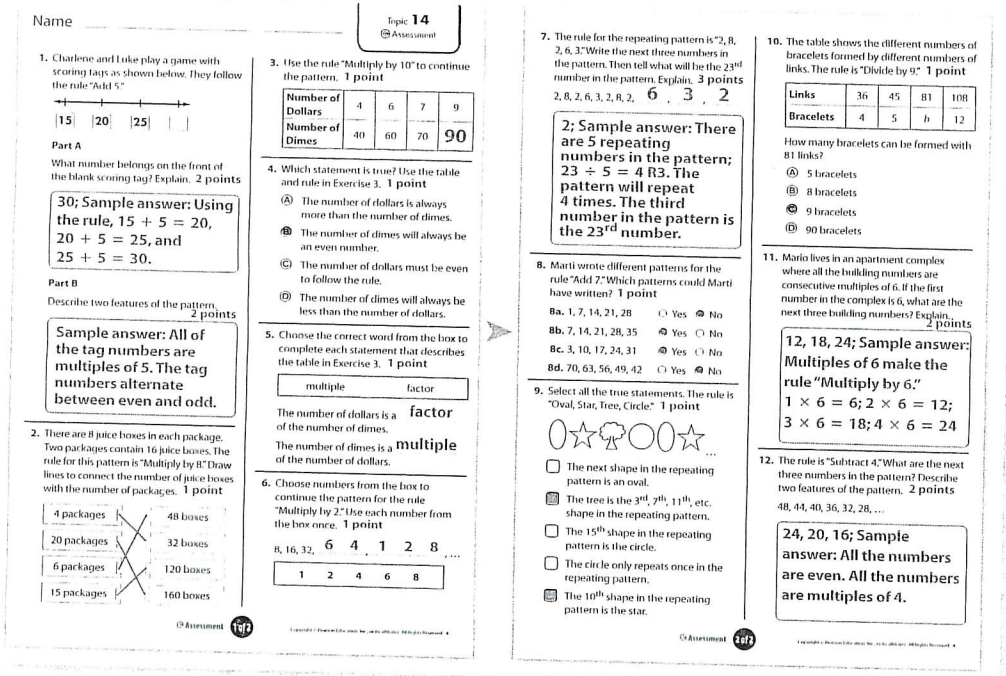
Assessment

Topic Assessment Masters



Name _____ Topic 14 Assessment

1. Charlene and Luke play a game with scoring tags as shown below. They follow the rule "Add 5."

|15| |20| |25| | |

Part A
What number belongs on the front of the blank scoring tag? Explain. 2 points

30; Sample answer: Using the rule, 15 + 5 = 20, 20 + 5 = 25, and 25 + 5 = 30.

Part B
Describe two features of the pattern. 2 points

Sample answer: All of the tag numbers are multiples of 5. The tag numbers alternate between even and odd.

2. There are 8 juice boxes in each package. Two packages contain 16 juice boxes. The rule for this pattern is "Multiply by 8." Draw lines to connect the number of juice boxes with the number of packages. 1 point

4 packages	48 boxes
20 packages	32 boxes
6 packages	120 boxes
15 packages	160 boxes

3. Use the rule "Multiply by 10" to continue the pattern. 1 point

Number of Dollars	4	6	7	9
Number of Dimes	40	60	70	90

4. Which statement is true? Use the table and rule in Exercise 3. 1 point

Ⓐ The number of dollars is always more than the number of dimes.
Ⓑ The number of dimes will always be an even number.
Ⓒ The number of dollars must be even to follow the rule.
Ⓓ The number of dimes will always be less than the number of dollars.

5. Choose the correct word from the box to complete each statement that describes the table in Exercise 3. 1 point

multiple | factor

The number of dollars is a factor of the number of dimes.
The number of dimes is a multiple of the number of dollars.

6. Choose numbers from the box to continue the pattern for the rule "Multiply by 2." Use each number from the box once. 1 point

8, 16, 32, 6, 4, 1, 2, 8, ...

1 2 4 6 8

Assessment T6T

7. The rule for the repeating pattern is "2, 8, 2, 6, 3." Write the next three numbers in the pattern. Then tell what will be the 23rd number in the pattern. Explain. 3 points

2, 8, 2, 6, 3, 2, 8, 2, 6, 3, 2

2; Sample answer: There are 5 repeating numbers in the pattern; 23 ÷ 5 = 4 R3. The pattern will repeat 4 times. The third number in the pattern is the 23rd number.

8. Marti wrote different patterns for the rule "Add 7." Which patterns could Marti have written? 1 point

8a. 1, 7, 14, 21, 28 ○ Yes ● No
8b. 7, 14, 21, 28, 35 ● Yes ○ No
8c. 3, 10, 17, 24, 31 ● Yes ○ No
8d. 70, 63, 56, 49, 42 ○ Yes ● No

9. Select all the true statements. The rule is "Oval, Star, Tree, Circle." 1 point

☐ The next shape in the repeating pattern is an oval.
☑ The tree is the 3rd, 7th, 11th, etc. shape in the repeating pattern.
☐ The 15th shape in the repeating pattern is the circle.
☐ The circle only repeats once in the repeating pattern.
☑ The 10th shape in the repeating pattern is the star.

10. The table shows the different numbers of bracelets formed by different numbers of links. The rule is "Divide by 9." 1 point

Links	36	45	81	108
Bracelets	4	5	b	12

How many bracelets can be formed with 81 links?

Ⓐ 5 bracelets
Ⓑ 8 bracelets
Ⓒ 9 bracelets
Ⓓ 90 bracelets

11. Mario lives in an apartment complex where all the building numbers are consecutive multiples of 6. If the first number in the complex is 6, what are the next three building numbers? Explain. 2 points

12, 18, 24; Sample answer: Multiples of 6 make the rule "Multiply by 6." 1 × 6 = 6; 2 × 6 = 12; 3 × 6 = 18; 4 × 6 = 24

12. The rule is "Subtract 4." What are the next three numbers in the pattern? Describe two features of the pattern. 2 points

48, 44, 40, 36, 32, 28, ...

24, 20, 16; Sample answer: All the numbers are even. All the numbers are multiples of 4.

Assessment T6T

RTI Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1A	4.OA.C.5	2	F25
1B	4.OA.C.5	1	F25
2	4.OA.C.5	1	F26
3	4.OA.C.5	1	F26
4	4.OA.C.5	1	F26
5	4.OA.C.5	1	F26
6	4.OA.C.5	1	F26
7	4.OA.C.5	3	F24
8	4.OA.C.5	1	F25
9	4.OA.C.5	1	F24
10	4.OA.C.5	1	F26
11	4.OA.C.5	2	F26
12	4.OA.C.5, MP.7	1	F27

The Topic Assessment Masters assess the same content item for item as the Topic Assessment in the Student's Edition.

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1A	2	Correct answer and explanation
	1	Correct answer or explanation
7	3	Correct numbers, answer, and explanation

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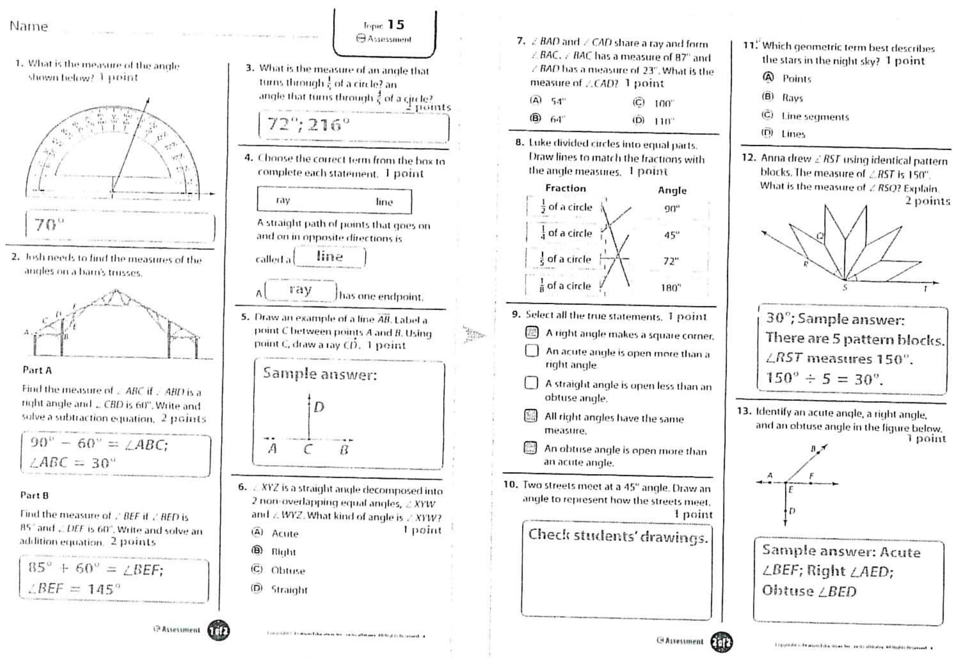
Assessment

Topic Assessment Masters


Name

Topic 15 Assessment

1. What is the measure of the angle shown below? 1 point

70°

2. Josh needs to find the measures of the angles on a barn's trusses.

Part A
Find the measure of ∠ABC if ∠ABD is a right angle and ∠CBD is 60°. Write and solve a subtraction equation. 2 points

90° − 60° = ∠ABC;
∠ABC = 30°

Part B
Find the measure of ∠BEF if ∠BED is 85° and ∠DEF is 60°. Write and solve an addition equation. 2 points

85° + 60° = ∠BEF;
∠BEF = 145°

3. What is the measure of an angle that turns through $\frac{1}{5}$ of a circle? an angle that turns through $\frac{3}{5}$ of a circle? 2 points

72°; 216°

4. Choose the correct term from the box to complete each statement. 1 point

ray line

A straight path of points that goes on and on in opposite directions is called a line.
A ray has one endpoint.

5. Draw an example of a line AB. Label a point C between points A and B. Using point C, draw a ray CD. 1 point

Sample answer:

6. ∠XYZ is a straight angle decomposed into 2 non-overlapping equal angles, ∠XYW and ∠WYZ. What kind of angle is ∠XYW? 1 point
Ⓐ Acute
Ⓑ Right
Ⓒ Obtuse
Ⓓ Straight

7. ∠BAD and ∠CAD share a ray and form ∠BAC. ∠BAC has a measure of 87° and ∠BAD has a measure of 23°. What is the measure of ∠CAD? 1 point
Ⓐ 54° Ⓒ 100°
Ⓑ 64° Ⓓ 110°

8. Luke divided circles into equal parts. Draw lines to match the fractions with the angle measures. 1 point

Fraction	Angle
$\frac{1}{2}$ of a circle	90°
$\frac{1}{4}$ of a circle	45°
$\frac{1}{5}$ of a circle	72°
$\frac{1}{8}$ of a circle	180°

9. Select all the true statements. 1 point
- A right angle makes a square corner.
- An acute angle is open more than a right angle.
- A straight angle is open less than an obtuse angle.
- All right angles have the same measure.
- An obtuse angle is open more than an acute angle.

10. Two streets meet at a 45° angle. Draw an angle to represent how the streets meet. 1 point

Check students' drawings.

11. Which geometric term best describes the stars in the night sky? 1 point
Ⓐ Points
Ⓑ Rays
Ⓒ Line segments
Ⓓ Lines

12. Anna drew ∠RST using identical pattern blocks. The measure of ∠RST is 150°. What is the measure of ∠RSQ? Explain. 2 points

30°; Sample answer: There are 5 pattern blocks. ∠RST measures 150°. 150° ÷ 5 = 30°.

13. Identify an acute angle, a right angle, and an obtuse angle in the figure below. 1 point

Sample answer: Acute ∠BEF; Right ∠AED; Obtuse ∠BED

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.MD.C.6, MP.5	1	118
2A	4.MD.C.7	2	119
2B	4.MD.C.7	2	119
3	4.MD.C.5a	1	118
4	4.G.A.1	1	12
5	4.G.A.1	1	12
6	4.MD.C.7	1	119
7	4.MD.C.7	1	119
8	4.MD.C.5a	1	118
9	4.MD.C.5	1	13
10	4.G.A.1	1	119
11	4.G.A.1	1	12
12	4.MD.C.7	3	119
13	4.G.A.1	1	13

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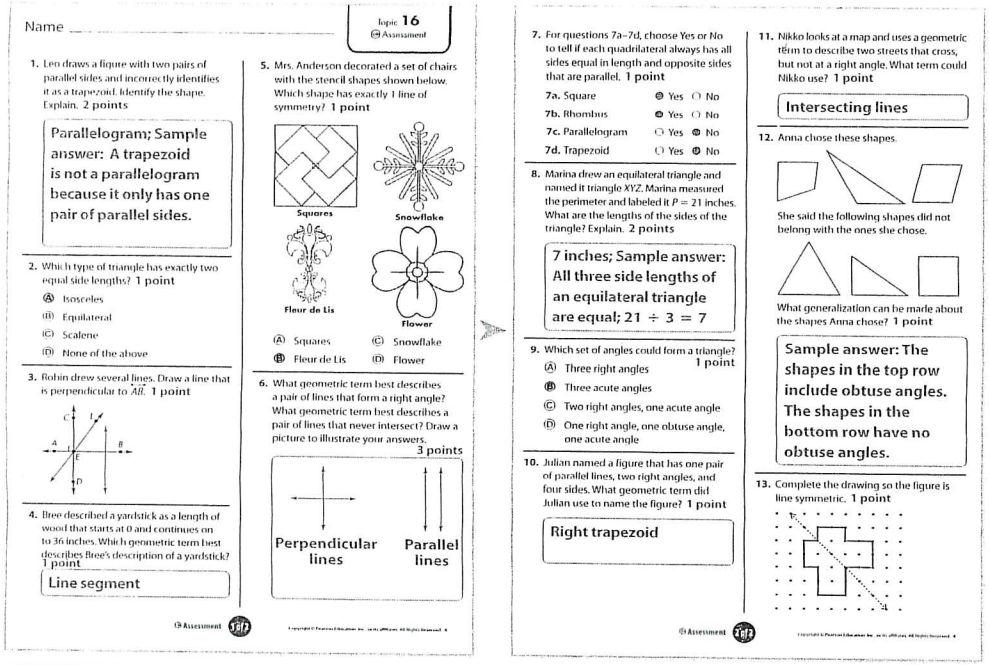

Name _____ Topic 16 Assessment

1. Leo draws a figure with two pairs of parallel sides and incorrectly identifies it as a trapezoid. Identify the shape. Explain. 2 points

Parallelogram; Sample answer: A trapezoid is not a parallelogram because it only has one pair of parallel sides.

2. Which type of triangle has exactly two equal side lengths? 1 point

Ⓐ Isosceles
Ⓑ Equilateral
Ⓒ Scalene
Ⓓ None of the above

3. Robin drew several lines. Draw a line that is perpendicular to $\overline{AB}$. 1 point

4. Bree described a yardstick as a length of wood that starts at 0 and continues on to 36 inches. Which geometric term best describes Bree's description of a yardstick? 1 point

Line segment

5. Mrs. Anderson decorated a set of chairs with the stencil shapes shown below. Which shape has exactly 1 line of symmetry? 1 point

Squares, Snowflake, Fleur de Lis, Flower

Ⓐ Squares Ⓒ Snowflake
Ⓑ Fleur de Lis Ⓓ Flower

6. What geometric term best describes a pair of lines that form a right angle? What geometric term best describes a pair of lines that never intersect? Draw a picture to illustrate your answers. 3 points

Perpendicular lines Parallel lines

7. For questions 7a–7d, choose Yes or No to tell if each quadrilateral always has all sides equal in length and opposite sides that are parallel. 1 point

7a. Square	● Yes	○ No
7b. Rhombus	● Yes	○ No
7c. Parallelogram	○ Yes	● No
7d. Trapezoid	○ Yes	● No

8. Marina drew an equilateral triangle and named it triangle XYZ. Marina measured the perimeter and labeled it $P = 21$ inches. What are the lengths of the sides of the triangle? Explain. 2 points

7 inches; Sample answer: All three side lengths of an equilateral triangle are equal; 21 ÷ 3 = 7

9. Which set of angles could form a triangle? 1 point

Ⓐ Three right angles
Ⓑ Three acute angles
Ⓒ Two right angles, one acute angle
Ⓓ One right angle, one obtuse angle, one acute angle

10. Julian named a figure that has one pair of parallel lines, two right angles, and four sides. What geometric term did Julian use to name the figure? 1 point

Right trapezoid

11. Nikko looks at a map and uses a geometric term to describe two streets that cross, but not at a right angle. What term could Nikko use? 1 point

Intersecting lines

12. Anna chose these shapes.

She said the following shapes did not belong with the ones she chose.

What generalization can be made about the shapes Anna chose? 1 point

Sample answer: The shapes in the top row include obtuse angles. The shapes in the bottom row have no obtuse angles.

13. Complete the drawing so the figure is line symmetric. 1 point

Assessment

Scoring Guide

Item	Points	Topic Assessment (Student's Edition and Masters)
1	2	Correct answer and explanation
	1	Correct answer or explanation
2	1	Correct choice selected
3	1	Correct answer
4	1	Correct answer

Item Analysis for Diagnosis and Intervention

Item	Standard	DOK	MDIS
1	4.G.A.2, MP.3	2	16
2	4.G.A.2	1	15
3	4.G.A.1	1	12
4	4.G.A.1	1	12
5	4.G.A.3	1	110
6	4.G.A.1	3	12
7	4.G.A.2	1	16
8	4.G.A.2	2	15
9	4.G.A.2	2	15
10	4.G.A.2	2	16
11	4.G.A.1	1	12
12	4.G.A.2	3	15, 16
13	4.G.A.3	2	110

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