

Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

1. What is a numerical expression for the word phrase below?

21 increased by 14

A numerical expression for "21 increased by 14" is .

2. Evaluate $3 + 9 \times 2$.

The value of $3 + 9 \times 2$ is .

3. Evaluate the numerical expressions. Decide whether they are equivalent.

$$37 - 10$$

$$3 \times 9$$

The value of $37 - 10$ is .

The value of 3×9 is .

The expressions equivalent.

4. **School Projects** You worked on a school project every day for 5 days. Each day, you worked for 3 hours in the morning and 4 hours in the afternoon. Which expression correctly represents the total number of hours you worked on the project? How many hours did you work on the project over the 5 days?

Which expression represents the total number of hours you worked on the project?

A. $5 \times (3 + 4)$

B. $(5 + 3) \times 4$

C. $3 + 4 \times 5$

D. $(5 \times 3) + 4$

E. $3 \times 4 + 5$

You worked on the project for hours over the 5 days.

Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

5. Classify this expression as either a numerical expression or an algebraic expression.

$$18 - 2$$

The expression $18 - 2$ is a(n) expression.

6. An office manager is renting a local hall for an upcoming event. The hall costs \$200. The food costs \$14 per person. The office manager is not sure how many people will attend. Which quantity is not a variable quantity—the cost to rent the hall, the number of people who will attend, or the total cost of the food?

Choose the correct answer below.

- the total cost of the food
- the number of people who will attend
- the cost to rent the hall

7. Describe the expression using an appropriate term or phrase.

$$8y - (4x \div 2)$$

Which is the correct description?

- product of two terms
- sum of two terms
- difference of two terms
- quotient of two terms

8. **Think About the Process** How can you use parentheses to change the expression $18 - 6y \div 3$ so that it is a quotient of two terms?

Choose the correct answer below.

- A. Place the parentheses around $y \div 3$.
- B. Place the parentheses around $18 - 6y$.
- C. Place the parentheses around $6y \div 3$.
- D. Place the parentheses around $6y$.

Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

9. What is an algebraic expression for "49 more than q"?

An algebraic expression is .

10. The length of a rectangle is two times the width. If the width is represented by x , then write an algebraic expression that describes the length.

The expression that describes the length is .

11. Lindsey has 47 coins in her change purse that are either dimes or quarters. If n represents the number of quarters she has, write an expression in terms of n that describes the number of dimes.

The algebraic expression is .

12. Write an algebraic expression for "55 more than the product of 134 and n ."

An algebraic expression for "55 more than the product of 134 and n " is .

13. Evaluate $6 \times p$ for $p = 3$.

$$6 \times p = \text{$$

(Type a whole number.)

14. Evaluate $5b - c$ for $b = 7$ and $c = 4$.

$$5b - c = \text{$$

(Type a whole number.)

15. You are buying balloons for a party. A small balloon costs \$3. A large balloon costs \$4. Write an algebraic expression for the cost of x small balloons and y large balloons. Then find the total cost for 14 small balloons and 8 large balloons.

An algebraic expression for the cost of x small balloons and y large balloons is .

The total cost for 14 small balloons and 8 large balloons is \$.

Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

16. **Class Trip** A class is going on a trip to a museum. It costs \$840 to rent a bus. Each ticket to the museum costs \$12. Write an algebraic expression that represents the cost of the trip for n people. Then evaluate this expression for 36 people.

An algebraic expression that represents the cost of the trip for n people is .

The cost of the trip for 36 people is \$.

17. Rewrite the expression using an exponent. Then find the value of the expression.

$$4 \times 4 \times 4$$

Rewrite the expression using an exponent.

$$4 \times 4 \times 4 = \text{}$$

The value of the expression is .

(Type a whole number.)

18. What is the value of $4x^2 + y^2$ for $x = 3$ and $y = 2$?

$$4x^2 + y^2 = \text{} \text{ (Type a whole number.)}$$

19. The area of a square is s^2 , where s is the side length. Find the area of a square with side length 9 units.

The area is square units.

(Type a whole number.)

20. Evaluate the expression below for $x = 5$ and $y = 3$.

$$x^2 + 2(x + y)$$

When $x = 5$ and $y = 3$, $x^2 + 2(x + y) = \text{}$. (Type an integer or a decimal.)

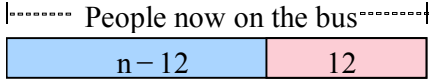
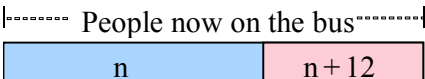
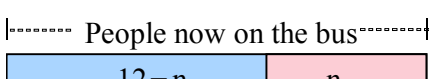
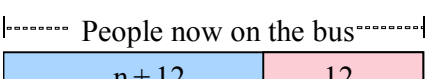
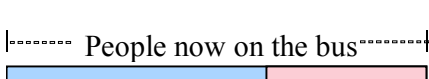
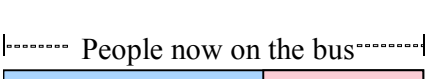
Student: _____
 Date: _____
 Time: _____

Instructor: Pearson School
 Course: digits - grade 6
 Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

21. Suppose there are n people on a bus. At the next stop, 12 more people get on the bus. No one gets off the bus. Draw a bar diagram to model the number of people now on the bus. Use this model to write an algebraic expression for the number of people now on the bus.

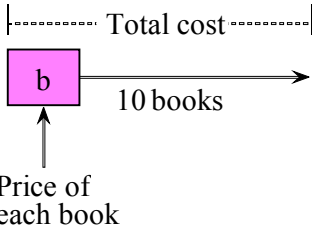
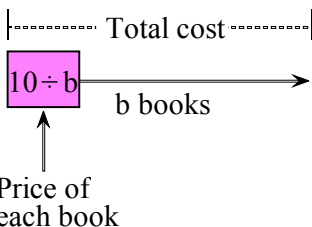
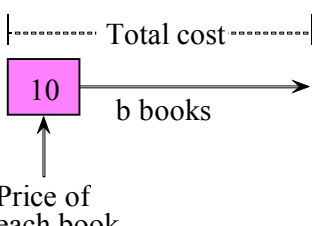
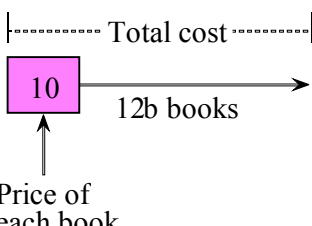
Which bar diagram models the number of people now on the bus?

- A. 
- B. 
- C. 
- D. 
- E. 
- F. 

An algebraic expression for the number of people now on the bus is .

22. Suppose a bookstore sells b copies of a book. The price of the book is \$10. Draw a bar diagram for the total cost of the b books. Then write an algebraic expression for the total cost.

Which bar diagram models the total cost of the b books?

- A. 
- B. 
- C. 
- D. 

An algebraic expression for the total cost is .

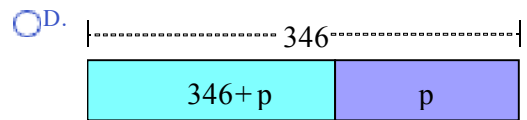
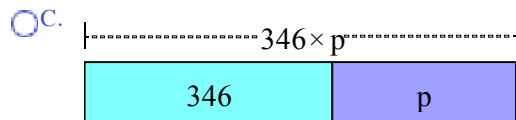
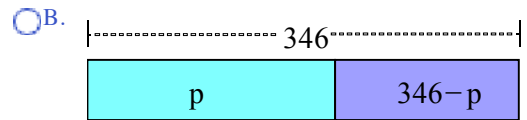
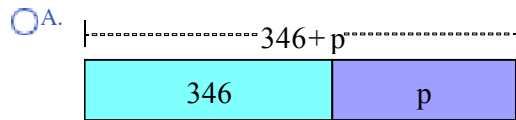
Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

23. A clothing store has 346 T-shirts. The store receives a shipment of p T-shirts. Draw a bar diagram representing the number of T-shirts the store has now. Then write an algebraic expression for the number of T-shirts the store has now.

Which bar diagram models the number of T-shirts the store has now?



An algebraic expression for the number of T-shirts the store has now is .

Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

1. $21 + 14$

2. 21

3. 27
27
are

4. A
35

5. numerical

6. the third choice

7. the third choice

8. B

9. $q + 49$

10. $2x$

11. $47 - n$

12. $134n + 55$

13. 18

14. 31

Student: _____
Date: _____
Time: _____

Instructor: Pearson School
Course: digits - grade 6
Book: digits, grade 6 (Middle Grades Math)

Assignment: Topic 1 Test

15. $3x + 4y$
74

16. $12 \times n + 840$
1,272

17. 4^3
64

18. 40

19. 81

20. 41

21. F
 $n + 12$

22. C
10b

23. A
 $346 + p$