

Name

Date

## 6<sup>th</sup> Grade Benchmark for Topics 3 and 4

Be sure to show all of your thinking, read each question carefully, and provide complete answers. Make sure to answer each questions fully.

**Standards:** 6.EE.C.9, 6.NS.C.6c, 6.EE.B.5, 6.NS.C.6a, 6.EE.A.4, 6.EE.B.7, 6.NS.C.6b, 6.EE.A.1, 6.EE.A.3, 6.NS.B.4, 6.NS.C.8, 6.G.A.3, 6.EE.A.1, 6.NS.A.1, 6.EE.A.2b, 6.NS.B.2, 6.EE.A.2a, 6.EE.B.8,

1. The table shows the number of cups of flour,  $f$ , that a bakery needs for the number of pound cakes that they make,  $p$ . (6.EE.C.9)

Pound Cakes, $p$	3	6	9	14
Cups of Flour, $f$	8.25	16.5	24.75	

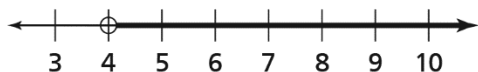
### Part A

Write an equation that relates the number of cups of flour to the number of pound cakes that the bakery makes.

### Part B

Use the equation to complete the table. Show how you determined the number of cups of flour needed for 14 cakes.

2. Write the inequality that the graph represents. (6.NS.C.6c)



3. Evaluate  $2l + 2w$ , when  $l = 10.8$  and  $w = 8.3$ . **(6.EE.B.5)**

4. Which expression is **NOT** equivalent to  $24 + 6x$ ? **(6.EE.A.4)**

A.  $2(3x + 12)$

B.  $28 + 4x - 4 + 2x$

C.  $5x + 7 + x + 17$

D.  $3(8 + 3x)$

5. Find the solution to each equation using inverse operations. (6.EE.B.7)

$$3k = 48 \quad k = \underline{\hspace{2cm}}$$

$$\frac{p}{3} = 6 \quad p = \underline{\hspace{2cm}}$$

$$m + 5 = 9 \quad m = \underline{\hspace{2cm}}$$

$$c - 12 = 27 \quad c = \underline{\hspace{2cm}}$$

6. Use the expression shown below. (6.EE.A.1)

$$4 \times 4 \times 4$$

**Part A**

Fill in the blank to write an equivalent expression using an exponent.

$$4 \square$$

**Part B**

What is the value of the expression?

7. Use the expression shown below. (6.EE.A.3)

$$1.5x + 8 + 0.5x - 3$$

Write an equivalent expression by combining like terms.

8. Find the greatest common factor (GCF) of 45 and 75. **(6.NS.B.4)**

9. Solve the following expression using order of operations. **(6.EE.A.1)**

$$4^2 + 3 \div 3$$

10. Complete the table by writing the parts of the expression below that correspond to the descriptions. **(6.EE.A.2b)**

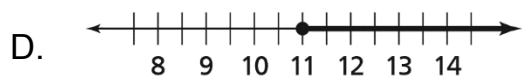
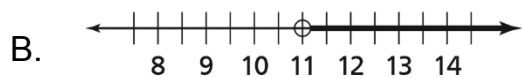
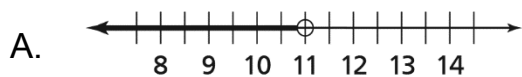
$$4y + 8$$

Description of Part y	Part of Expression
Variable	
Constant	
Coefficient	
Terms	

11. Write the algebraic expression for the following situation. (6.EE.A.2a)

Twice the number,  $n$ , plus 5

12. Which graph represents the solutions of the inequality  $k > 11$ ? (6.EE.B.8)



13. Find the least common multiple (LCM) of 8 and 12. (6.NS.B.4)