



Mathematics Grade 6

Ready EOG Practice 6.EE.3 (Creating Equivalent Expressions with Properties)

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Rockingham County

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1. Which displays the Commutative Property?

A. $W(X + Y) = W(X) + W(Y)$

B. $W(1) = w$

C. $(W + X) + Y = W + (X + Y)$

D. $W \times Y = Y \times W$

2. Which displays the Associative Property?

A. $(8 \times 2) \times 4 = 8 \times (2 \times 4)$

B. $8(2 + 4) = 8(2) = 8(4)$

C. $8 \times 2 = 2 \times 8$

D. $8(1) = 8$

3. Which displays the Distributive Property?

A. $11 \times 3 = 3 \times 11$

B. $11(3 \times 7) = 3(11 \times 7)$

C. $11(3 + 7) = 7(11 + 3)$

D. $11(3 + 7) = 11(3) + 11(7)$

4. Analyze this expression in the box.

$$8x - 3(x + 4)$$

What is the simplified form of this expression?

A. $5x - 12$

B. $5x + 4$

C. $11x - 4$

D. $11x + 12$

5. Analyze this expression.

$$5x + 2xy - 3x$$

Which is the simplified form of the expression?

A. $4xy$

B. $10xy$

C. $2x(1 + y)$

D. $2x(4 + y)$

6. $(x + y) + z = x + (y + z)$ is an example of which property?

A. Associative Property

B. Commutative Property

C. Distributive Property

D. Identity Property

7. Which displays the Commutative Property?

- A. $(6 \times 5) \times 3 = 6(5 \times 3)$
- B. $6(5 \times 3) = 6(5) + 6(3)$
- C. $6 \times 5 = 5 \times 6$
- D. $6(1) = 6$

8. The number sentence, $7 + 0 = 7$, is an example of which property of addition?

- A. The Identity Property of Addition
- B. The Zero Property of Addition
- C. The Cumulative Property of Addition
- D. The Distributive Property of Addition

9. Look at the equation in the box.

$$55 + y = 9 \times 9$$

What is the value of y in the equation?

- A. 16
- B. 18
- C. 26
- D. 36

10. Which statement explains the Identity Property of Multiplication?

- A. Multiply 6 times 0, and the product is 0.
- B. Multiply 6 times 1, and the product is 6.
- C. Multiply 6 times 6, and the product is 36.
- D. Multiply 6 times 10, and the product is 60.

11. An equation is written in the box.

$$(a \cdot b) + (a \cdot c) = a(b + c)$$

Which property is illustrated by the equation?

- A. Identity Property
- B. Distributive Property
- C. Commutative Property
- D. Associative Property

12. Four expressions are written in the table.

Expressions
$0 \times n$
$1 \times n$
$10 \times n$
$100 \times n$

What value of n makes all of the expressions equivalent?

- A. 0
- B. 1
- C. 10
- D. 100

13. Steve and Alec go to a baseball game. Pretzels cost \$4 each, and hotdogs cost \$4 each. Steve and Alec order 2 pretzels and 6 hotdogs. They calculate the total price differently.

Steve:

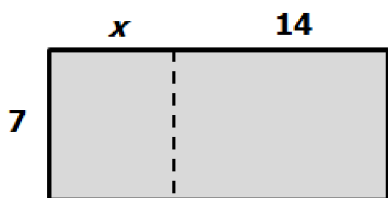
$$(2 \text{ pretzels} + 6 \text{ hotdogs}) \times \$4$$

Alec:

$$(2 \text{ pretzels} \times \$4) + (6 \text{ hotdogs} \times \$4)$$

Which property allows Steve and Alec to obtain the same correct answer?

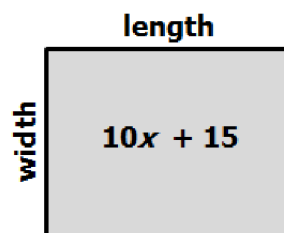
- A. Associative Property
 B. Commutative Property
 C. Distributive Property
 D. Inverse Property
14. A rectangle is drawn with the dimensions given.



Which expression represents the area of the rectangle?

- A. $7(x + 14) = 7x + 98$
 B. $7(x + 14) = 7x + 14$
 C. $7(x \cdot 14) = 98x$
 D. $7(x \cdot 14) = 686x$

15. A rectangle has an area of $10x + 15$.



Which dimensions can match the rectangle?

- A. width = $5x$
 length = $(2 + 3)$
 B. width = $5x$
 length = $(2 + 15)$
 C. width = 5
 length = $(2x + 15)$
 D. width = 5
 length = $(2x + 3)$

#	Answer	Objective
1.	D	Obj : 6.EE.3. Apply the properties of operations to g...
2.	A	Obj : 6.EE.3. Apply the properties of operations to g...
3.	D	Obj : 6.EE.3. Apply the properties of operations to g...
4.	A	Obj : 6.EE.3. Apply the properties of operations to g...
5.	C	Obj : 6.EE.3. Apply the properties of operations to g...
6.	A	Obj : 6.EE.3. Apply the properties of operations to g...
7.	C	Obj : 6.EE.3. Apply the properties of operations to g...

#	Answer	Objective
8.	A	Obj : 6.EE.3. Apply the properties of operations to g...
9.	C	Obj : 6.EE.7. Solve real-world and mathematical probl...
10.	B	Obj : 6.EE.3. Apply the properties of operations to g...
11.	B	Obj : 6.EE.3. Apply the properties of operations to g...
12.	A	Obj : 6.EE.3. Apply the properties of operations to g...
13.	C	Obj : 6.EE.3. Apply the properties of operations to g...
14.	A	Obj : 6.EE.3. Apply the properties of operations to g...
15.	D	Obj : 6.EE.3. Apply the properties of operations to g...

Objectives Measured:	Items	Questions measuring this objective
Obj : 6.EE.3. Apply the properties of operations to g...	14	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15
Obj : 6.EE.7. Solve real-world and mathematical probl...	1	9

#	Key	Item ID
1.	D	MC 32872
2.	A	MC 32871
3.	D	MC 32876
4.	A	MC 40106
5.	C	MC 40126
6.	A	MC 49796
7.	C	MC 49797

#	Key	Item ID
8.	A	MC 50071
9.	C	MC 50424
10.	B	MC 50440
11.	B	MC 139657
12.	A	MC 139658
13.	C	MC 139659
14.	A	MC 140158
15.	D	MC 140159