

# Algebra Concepts: Fall Progress

## Answer Key

Questions 1-3: Add and subtract the integers.

1.

$$(-6) + 4$$

Answer: -2

2.

$$-8 - 3$$

Answer: -11

3.

$$6 - (-8)$$

Answer: 14



Please stop, put your pencil down and wait for the next directions.



# Algebra Concepts: Fall Progress

(continued)

Questions 4-6: Multiply and divide the integers.

4.

$$-3 \times 8$$

Answer: -24

5.

$$-7(-3)$$

Answer: 21

6.

$$-28 \div -4$$

Answer: 7



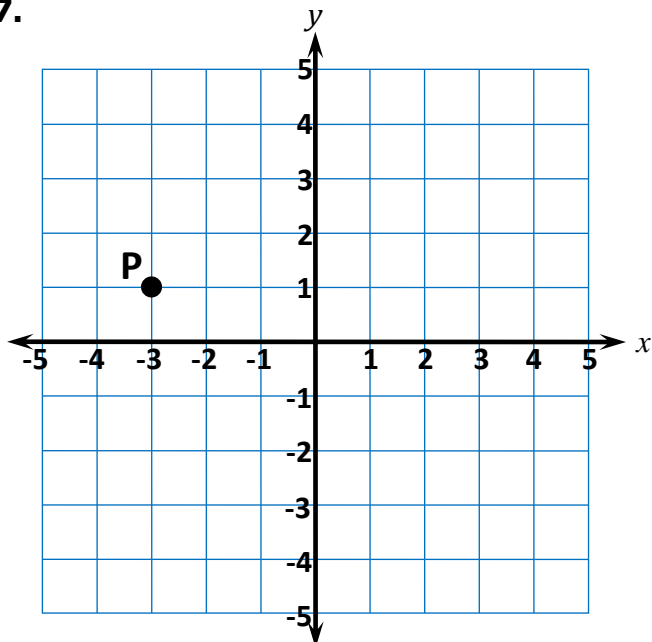
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# Algebra Concepts: Fall Progress

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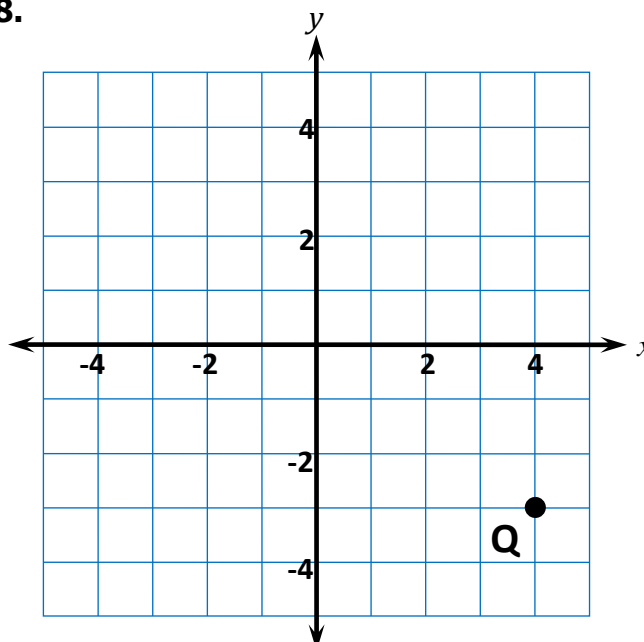
Questions 7-9: Write the ordered pair for the point.

7.



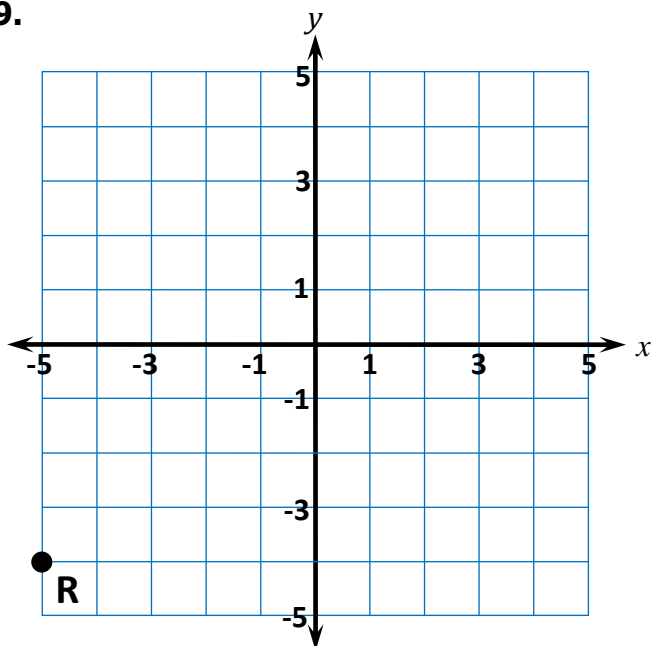
Answer:  $(-3, 1)$

8.



Answer:  $(4, -3)$

9.



Answer:  $(-5, -4)$



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# Algebra Concepts: Fall Progress

(continued)

Questions 10-12: Find the equivalent expression.

10.

The product of  $x$  and 4, decreased by 3

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

11.

2 more than 3 times  $x$

- $2x + 3$         $3x + 2$         $3(x + 2)$         $2(3 + x)$

12.

3 times the difference of  $x$  and 4

- $4x - 3$         $4(x - 3)$         $3x - 4$         $3(x - 4)$



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# Algebra Concepts: Fall Progress

(continued)

Questions 13-15: Evaluate the expression for the given value of  $x$ .

13. Evaluate  $3x + 4$  for  $x = 5$ .

Answer: 19

14. Evaluate  $x^2 + 5$  for  $x = 4$ .

Answer: 21

15. Evaluate  $18 - 4x$  for  $x = 2$ .

Answer: 10



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# Algebra Concepts: Fall Progress

(continued)

Questions 16-18: Find the equivalent expression.

16.

$$x + x$$

- $2x^2$      
   $x + 2$      
   $x^2$      
   $2x$

17.

$$5x + 3 + 2x$$

- $7x + 3$      
   $10x$      
   $10x^2$      
   $5x + 5$

18.

$$4(x + 3)$$

- $4x + 3$      
   $4x + 12$      
   $x^4 + 7$      
   $x + 12$



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# Algebra Concepts: Fall Progress

(continued)

Questions 19-21: Solve the equation.

19.

$$x + 5 = 15$$

Answer: 10

20.

$$24 = 3x$$

Answer: 8

21.

$$\frac{1}{2}x = 10$$

Answer: 20



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# Algebra Concepts: Fall Progress

(continued)

Questions 22-24: Find the equivalent expression.

22.

$$(3x + 2) + (x + 6)$$

- $4x + 8$         $3x + 8$         $4x + 12$         $3x + 12$

23.

$$(9x + 6) - (4x + 2)$$

- $5x + 8$         $13x + 4$         $5x + 4$         $13x + 8$

24.

$$(5x + 4) - (2x - 3)$$

- $3x + 7$         $3x + 1$         $7x + 1$         $7x + 7$



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# Algebra Concepts: Fall Progress

(continued)

Questions 25-27: Find the equivalent expression.

25.

$$5(x + 3)$$

- $5x + 15$ 
  $5x + 3$ 
  $15x$ 
  $x + 15$

26.

$$9(7x + 4)$$

- $7x + 36$ 
  $63x + 36$ 
  $99x$ 
  $63x + 4$

27.

$$5(3x + 7) + x$$

- $16x + 35$ 
  $15x + 35$ 
  $23x$ 
  $16x + 7$



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# Algebra Concepts: Fall Progress

(continued)

Questions 28-30: Find the equivalent expression.

**28.**

$$4x + 28$$

- $4(x + 7)$     
   $4(x + 28)$     
   $32x$     
   $4x + 7$

**29.**

$$18x - 3$$

- $-3(6x + 1)$     
   $3(6x - 1)$     
   $15x$     
   $3(15x - 1)$

**30.**

$$6x + 10$$

- $2(3x + 5)$     
   $2(3x + 10)$     
   $16x$     
   $6(x + 4)$



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# Algebra Concepts: Fall Progress

(continued)

Questions 31-33: Solve the equation.

31.

$$8 = 2x - 4$$

Answer: 6

32.

$$3(x + 5) = 21$$

Answer: 2

33.

$$\frac{1}{4}x + 5 = 7$$

Answer: 8



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