



Name \_\_\_\_\_ Date \_\_\_\_\_

## Algebra Concepts Screener - Winter

Questions 1-3: Add and subtract the integers.

1.

$$(-7) + 4$$

Answer: \_\_\_\_\_

2.

$$-9 - 4$$

Answer: \_\_\_\_\_

3.

$$5 - (-7)$$

Answer: \_\_\_\_\_



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



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(continued)

Questions 4-6: Multiply and divide the integers.

4.

$$-4 \times 7$$

Answer: \_\_\_\_\_

5.

$$-4(-6)$$

Answer: \_\_\_\_\_

6.

$$-56 \div 8$$

Answer: \_\_\_\_\_

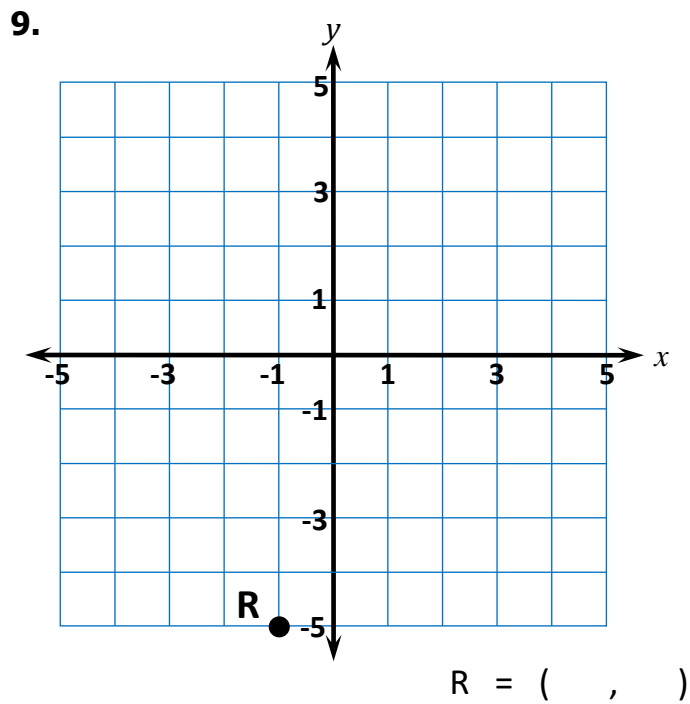
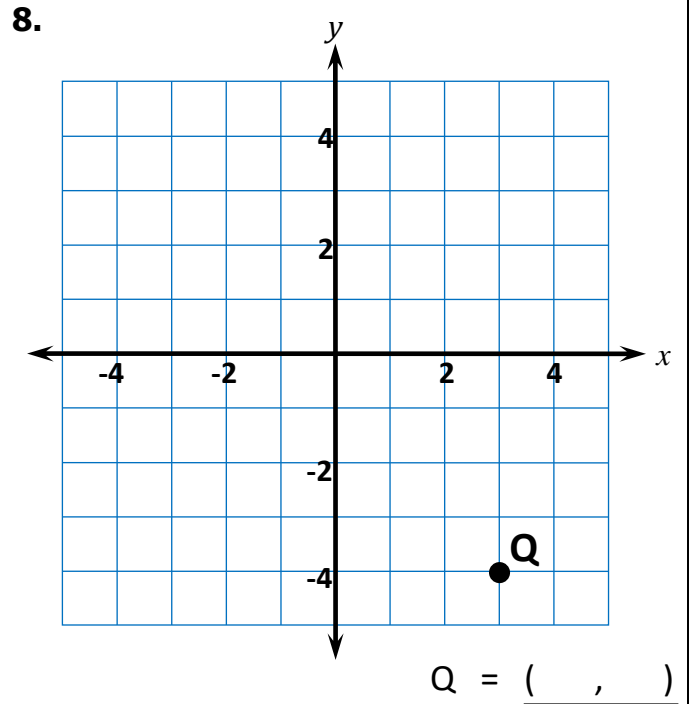
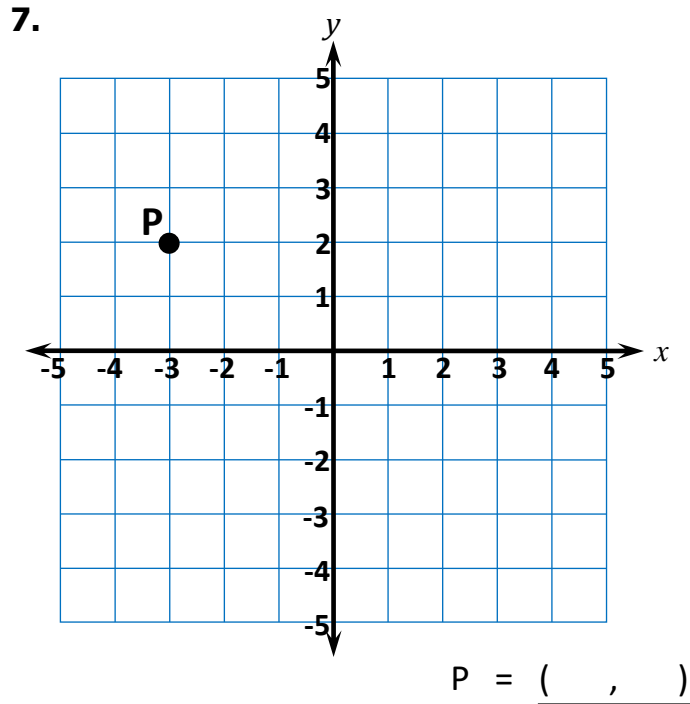


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(continued)

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



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(continued)

Questions 10-12: Find the equivalent expression.

**10.**

The product of  $x$  and 6, decreased by 2

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

**11.**

3 more than 5 times  $x$

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

**12.**

4 times the quantity of  $x$  minus 6

- $6x - 4$         $6(x - 4)$         $4x - 6$         $4(x - 6)$



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(continued)

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

13. Evaluate  $5x + 2$  for  $x = 3$ .

Answer: \_\_\_\_\_

14. Evaluate  $x^2 + 6$  for  $x = 4$ .

Answer: \_\_\_\_\_

15. Evaluate  $13 - 2x$  for  $x = 3$ .

Answer: \_\_\_\_\_



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(continued)

Questions 16-18: Find the equivalent expression.

16.

$$x + x + x + x$$

$4x^4$

$x + 4$

$x^4$

$4x$

17.

$$4x + 3 + 2x$$

$6x + 3$

$9x$

$9x^2$

$4x + 5$

18.

$$3(x + 4)$$

$3x + 4$

$3x + 12$

$x^3 + 7$

$x + 12$



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(continued)

Questions 19-21: Solve the equation.

19.

$$x + 5 = 10$$

$x =$  \_\_\_\_\_

20.

$$24 = 4x$$

$x =$  \_\_\_\_\_

21.

$$\frac{1}{4}x = 8$$

$x =$  \_\_\_\_\_



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(continued)

Questions 22-24: Find the equivalent expression.

22.

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

- $3x + 5$         $3x + 8$         $2x + 5$         $2x + 8$

23.

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

- $10x + 15$         $2x + 15$         $10x + 3$         $2x + 3$

24.

$$(10x + 2) - (8x - 4)$$

- $2x - 2$         $2x + 6$         $18x + 6$         $18x - 2$



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(continued)

Questions 25-27: Find the equivalent expression.

25.

$$4(x + 6)$$

- $4x + 24$         $4x + 6$         $24x$         $x + 24$

26.

$$8(5x + 2)$$

- $40x + 2$         $40x + 16$         $56x$         $5x + 16$

27.

$$3(4x + 6) + x$$

- $13x + 6$         $12x + 18$         $31x$         $13x + 18$



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(continued)

Questions 28-30: Find the equivalent expression.

**28.**

$$5x + 30$$

- $5(x + 6)$       $5(x + 30)$       $35x$       $5x + 6$

**29.**

$$12x - 4$$

- $-4(3x + 1)$       $4(3x - 1)$       $8x$       $4(8x - 1)$

**30.**

$$6x + 15$$

- $6(x + 9)$       $3(3x + 12)$       $21x$       $3(2x + 5)$



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(continued)

Questions 31-33: Solve the equation.

**31.**

$$14 = 2x - 6$$

$x =$  \_\_\_\_\_

**32.**

$$3(x + 2) = 15$$

$x =$  \_\_\_\_\_

**33.**

$$\frac{1}{4}x + 2 = 10$$

$x =$  \_\_\_\_\_



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