

## Algebra Readiness Test

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**Simplify:**

1.  $3(5+2) - 8 + 2(3) =$

2.  $10 + 9/3 \cdot 4 + 2 =$

3.  $3^3 + 5^2 =$

4.  $(7^2 - 5) \cdot 2 =$

5.  $3^2 + 7(2+3) - 1 =$

**Simplify (If your answer is an improper fraction, rewrite it as a mixed number):**

6.  $\frac{1}{3} + \frac{2}{5} =$

7.  $\frac{3}{5} - \frac{2}{6} =$

8.  $\frac{2}{3} \cdot \frac{5}{6} =$

9.  $\frac{3}{4} \div \frac{1}{2} =$

10.  $\frac{2}{3} + \frac{1}{2} \cdot \frac{1}{4} =$

**Simplify:**

11.  $12(-5) =$

12.  $-90 \div (-9) =$

13.  $-15 - (-6) =$

14.  $22 + (-8) =$

15.  $(-3)^2 + 8 - 10(-2) =$

**Simplify:**

16.  $2x + 3 - x =$

17.  $2y + 3y - 2 + 5 =$

18.  $3x + 2y - 5 + 3y - 2x =$

19.  $3xy + 2x + 5y - x =$

20.  $3(x+1) - 2x =$

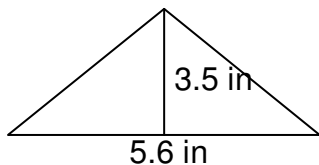
**Evaluate the expression for the given values:**

21.  $x + y - z$  for  $x = -3$   $y = 2$   $z = -9$

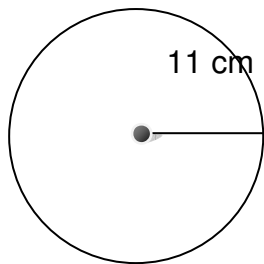
22.  $2x + 2y =$  for  $x = -2$   $y = 5$

23.  $xy - 3x =$  for  $x = 4$   $y = -8$

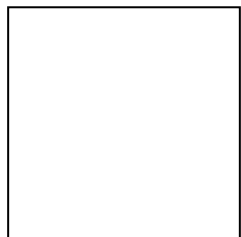
24. **Find the area of the triangle.**



25. **Identify the diameter of the circle. Then find the circumference.**



26. Find the perimeter and area of the square.



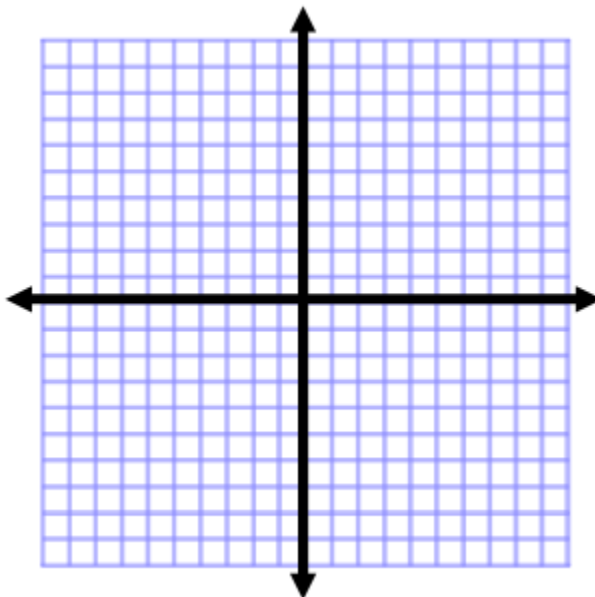
16 in.

27. John is going to fertilize his lawn. His lawn is a rectangle that measures 240 feet by 82 feet. The amount of fertilizer required is 0.03 ounces per square foot.

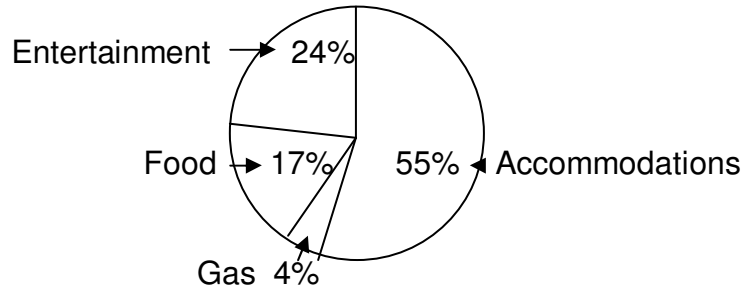
- Find the area of the lawn.
- How much fertilizer does John need to buy?

28. Plot the following points on the grid below.

$(5, 2)$   $(-4, 1)$   $(0, 0)$   $(-3, -5)$   $(1, -7)$



The circle graph below shows how an average family spends money on vacation. Use this information to answer the questions below.



29. If a family spends an average of \$3000 on a local vacation, how much money was spent on gas?

30. What **fraction** of the cost is spent on food and entertainment?

31. What is the square root of 36?

32. Simplify:  $(1.5)(2.5)$