

Algebra Readiness Test

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

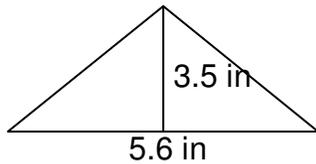
Evaluate the expression for the given values:

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

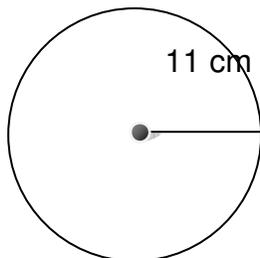
22. $2x + 2y =$ for $x = -2$ $y = 5$

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

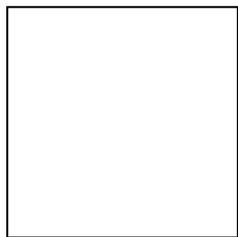
24. **Find the area of the triangle.**



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



26. Find the perimeter and area of the square.



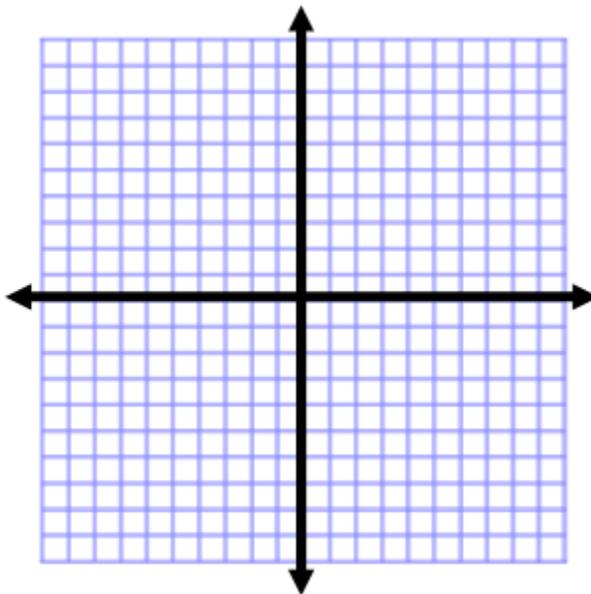
16 in.

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.

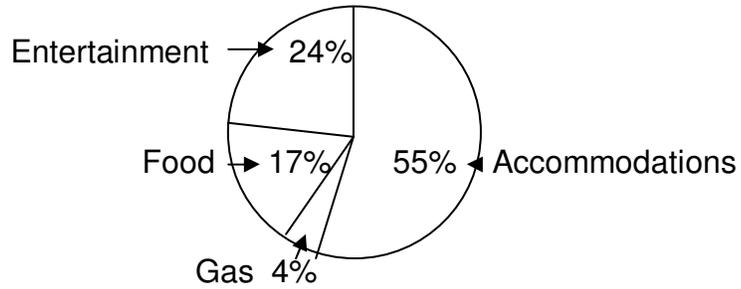
- Find the area of the lawn.
- How much fertilizer does John need to buy?

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?