

Pre-Algebra Placement Test

Follow the signs.

1. $(-8) + (-25) =$

2. $(-7) \times (-15) =$

3. $(11) - (-6) =$

4. $(-45) \div (9) =$

Simplify.

5. $-1^3 =$

6. $-(5)^2 =$

7. $(-8)^2 =$

8. $\left(-\frac{2}{3}\right)^2 =$

Write in exponential notation.

9. 95.214

Write in decimal notation.

10. $1 \times 10^3 + 8 \times 10^2 + 2 \times 10^1 + 5 \times 10^0 + 6 \times \frac{1}{10^1} =$

Simplify each expression.

11. $\sqrt{100} =$

12. $\sqrt{Y^2} =$

Simplify and solve for the unknown. Use order of operations as needed. Check your work.

13. $8 \cdot 2 + 5^2 - Y = 2(Y + 1) + 6$

14. Check

15. $8M - 4M - 6 - 3 + 5M = 8^2 - 1$

16. Check

17. $(-3)^2 \div 9 + 6 = D$

18. Check

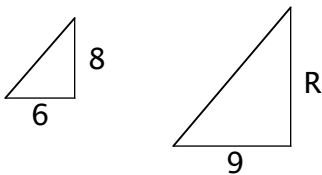
Solve for the unknown.

19. $\frac{1}{8} = \frac{7}{Y}$

20. $\frac{11}{12} = \frac{A}{48}$

Write a proportion for each set of similar polygons and solve for the unknown side.

21.



Find the LCM for each pair of numbers.

22. 3 and 4

23. 6 and 9

Find the GCF for each pair of numbers.

24. 24 and 40

25. 15 and 35

Add the polynomials.

26.
$$\begin{array}{r} 5X^2 + 4X + 2 \\ 8X^2 + 3X - 4 \\ \hline \end{array}$$

27.
$$\begin{array}{r} 7X^2 - X - 3 \\ 6X^2 - 2X - 5 \\ \hline \end{array}$$

28.
$$\begin{array}{r} -4X^2 + 9X - 8 \\ 2X^2 - 6X + 1 \\ \hline \end{array}$$

29. What is the surface area of a rectangular solid with a length of seven inches, a width of five inches, and a height of six inches?

30. What is the surface area of a pyramid with a square base measuring 9 feet on a side if the slant height of each face is 11 feet?

31. The two legs of a right triangle measure 9 feet and 12 feet. What is the length of the hypotenuse of the triangle?

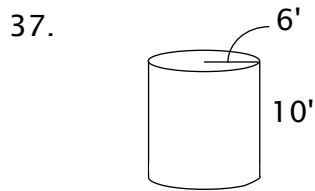
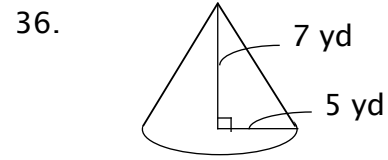
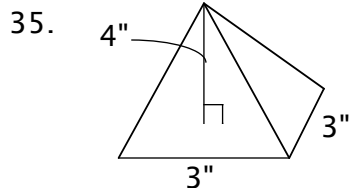
Multiply the binomials.

$$32. \begin{array}{r} 2X+1 \\ \times X+6 \\ \hline \end{array}$$

$$33. \begin{array}{r} X+7 \\ \times X+9 \\ \hline \end{array}$$

$$34. \begin{array}{r} 2X+4 \\ \times X+5 \\ \hline \end{array}$$

Find the volume. Round to hundredths.



Add or subtract the times.

38.
$$\begin{array}{r} 7:18 \\ - 3:05 \\ \hline \end{array}$$

39.
$$\begin{array}{r} 2:44 \\ + 1:59 \\ \hline \end{array}$$

40.
$$\begin{array}{r} 0136 \\ + 0438 \\ \hline \end{array}$$

Change to standard time.

41. 2120

42. 1611

43. 0345

Add or subtract the measurements.

44.
$$\begin{array}{r} 8' 3'' \\ - 5' 5'' \\ \hline \end{array}$$

45.
$$\begin{array}{r} 6 \text{ yd } 1 \text{ ft} \\ + 9 \text{ yd } 1 \text{ ft} \\ \hline \end{array}$$

46.
$$\begin{array}{r} 25 \text{ lb } 8 \text{ oz} \\ - 15 \text{ lb } 10 \text{ oz} \\ \hline \end{array}$$

Tell if the numbers are rational or irrational.

47. π

48. $\sqrt{25}$