

Geometry Honors Summer Review Packet – Topics from Algebra I

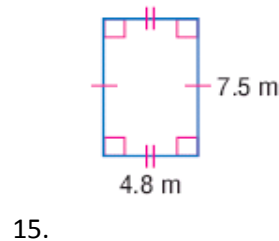
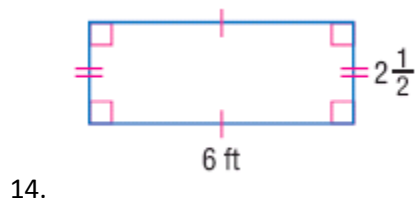
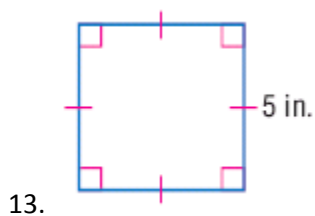
Graph and label each point in the coordinate plane.

1. $A(3, -2)$
2. $B(4, 0)$
3. $C(-4, -4)$
4. $D(-1, 2)$

Find each sum or difference.

5. $\frac{3}{4} + \frac{3}{8}$
6. $2\frac{5}{16} + 5\frac{1}{8}$
7. $\frac{7}{8} - \frac{9}{16}$
8. $11\frac{1}{2} - 9\frac{7}{16}$
9. $2 - 17$
10. $23 - (-14)$
11. $[-7 - (-2)]^2$
12. $9^2 + 13^2$

Find the perimeter and area of each figure.



Evaluate each expression for the given value of n .

16. $3n - 2$; $n = 4$
17. $(n + 1) + n$; $n = 6$
18. $n^2 - 3n$; $n = 3$
19. $n(\frac{n}{2})$; $n = 10$

Solve each equation.

20. $6x - 42 = 4x$
21. $8 - 3n = -2 + 2n$
22. $3(y + 2) = -12 + y$
23. $12 + 7x = x - 18$
24. $3x + 4 = \frac{1}{2}x - 5$
25. $2 - 2x = \frac{2}{3}x - 2$

$$26. \frac{5}{6} = \frac{x-4}{12}$$

$$27. \frac{4}{3} = \frac{y+2}{y-1}$$

$$28. \frac{2y}{4} = \frac{32}{y}$$

Find the slope of the line having the given coordinates.

29. (3, 5) and (0, -1)

30. (-6, -3) and (2, -3)

31. (-3, 4) and (2, -2)

Simplify.

32. $\sqrt{32}$

33. $\sqrt{75}$

34. $\sqrt{50} \cdot \sqrt{10}$

35. $\sqrt{12} \cdot \sqrt{20}$

36. $\sqrt{6} \cdot \sqrt{6}$

37. $\sqrt{56a^2b^4c^5}$

38. $\sqrt{\frac{81}{49}}$

39. $\sqrt{\frac{121}{16}}$

Graph each equation using the slope and y-intercept.

40. $y = -x + 2$

41. $y = x - 2$

42. $y = 3x - 1$

Solve each system of equations by elimination or substitution.

$$\begin{aligned} 43. \quad x - 4y &= 22 \\ 2x + 5y &= -21 \end{aligned}$$

$$\begin{aligned} 44. \quad y + 5x &= -3 \\ 3y - 2x &= 8 \end{aligned}$$

$$\begin{aligned} 45. \quad 3x + 4y &= -1 \\ -9x - 4y &= 13 \end{aligned}$$

$$\begin{aligned} 46. \quad -4x + 5y &= -11 \\ 2x + 3y &= 11 \end{aligned}$$

Find the product using the F.O.I.L. method.

$$47. (m - 1)(m - 4)$$

$$48. (d + 1)(d - 1)$$

Factor each polynomial.

$$49. n^2 + 8n + 15$$

$$50. q^2 - 9q + 18$$