

Assignment

Simplify each expression. For fractions, make sure no radical is left in the denominator.

$$1) 2\sqrt{1000}$$

$$20\sqrt{10}$$

$$2) 9\sqrt{40}$$

$$18\sqrt{10}$$

$$3) 10\sqrt{80}$$

$$40\sqrt{5}$$

$$4) 10\sqrt{900}$$

$$300$$

$$5) \sqrt{5} + \sqrt{2} + \sqrt{7} + \sqrt{5}$$

$$2\sqrt{5} + \sqrt{2} + \sqrt{7}$$

$$6) \sqrt{8} + \sqrt{8} + \sqrt{2} + \sqrt{8}$$

$$7\sqrt{2}$$

$$7) -2\sqrt{20} + 2\sqrt{6} - \sqrt{45}$$

$$-7\sqrt{5} + 2\sqrt{6}$$

$$8) 4\sqrt{8} - 2\sqrt{6} - \sqrt{6}$$

$$8\sqrt{2} - 3\sqrt{6}$$

$$9) -3\sqrt{5} - \sqrt{80} + 3\sqrt{5}$$

$$-4\sqrt{5}$$

$$10) 4\sqrt{63} + 3\sqrt{48} - 3\sqrt{12}$$

$$12\sqrt{7} + 6\sqrt{3}$$

$$11) \sqrt{5}(\sqrt{3} + 4)$$

$$\sqrt{15} + 4\sqrt{5}$$

$$12) \sqrt{3}(4 + \sqrt{2})$$

$$4\sqrt{3} + \sqrt{6}$$

$$13) \sqrt{5}(\sqrt{10} + 3)$$

$$5\sqrt{2} + 3\sqrt{5}$$

$$14) \sqrt{3}(-\sqrt{3} + 3\sqrt{10})$$

$$-3 + 3\sqrt{30}$$

$$15) \frac{\sqrt{15}}{4\sqrt{48}} \frac{\sqrt{5}}{16}$$

$$16) \frac{4\sqrt{5}}{\sqrt{45}} \frac{4}{3}$$

$$17) \frac{\sqrt{3}}{\sqrt{27}}$$

$$\frac{1}{3}$$

$$18) \frac{2\sqrt{12}}{3\sqrt{3}} \frac{4}{3}$$

Points A, B, C, and D are collinear and positioned in that order. Find the length indicated.

$$19) \text{ Find } BD \text{ if } AB = x + 5, AC = x + 8,$$

$$CD = 11, \text{ and } BD = x + 16.$$

$$14$$

$$20) BC = 13 + x, AD = x + 28, AC = 20,$$

$$\text{and } BD = x + 18. \text{ Find } BC.$$

$$10$$

$$21) \text{ Find } AB \text{ if } CD = 10, AB = 2x - 23,$$

$$BC = x - 3, \text{ and } AD = 2x - 4.$$

$$1$$

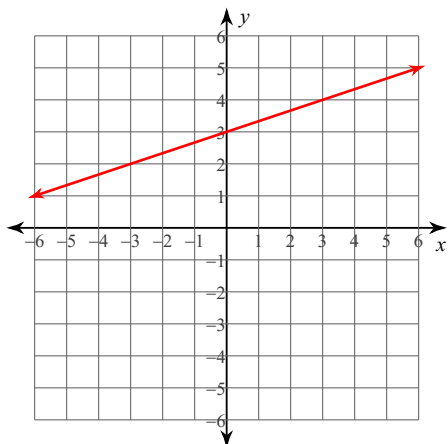
$$22) AD = 2x - 13, BC = 2x - 22, CD = 7,$$

$$\text{and } AB = 2x - 22. \text{ Find } AB.$$

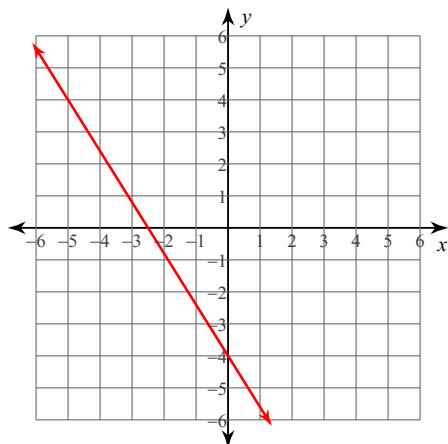
$$2$$

Sketch the graph of each line.

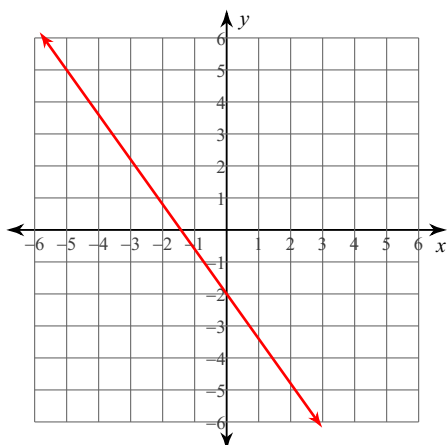
23) $y = \frac{1}{3}x + 3$



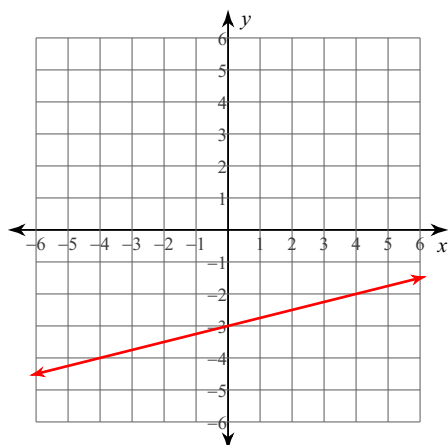
24) $y = -\frac{8}{5}x - 4$



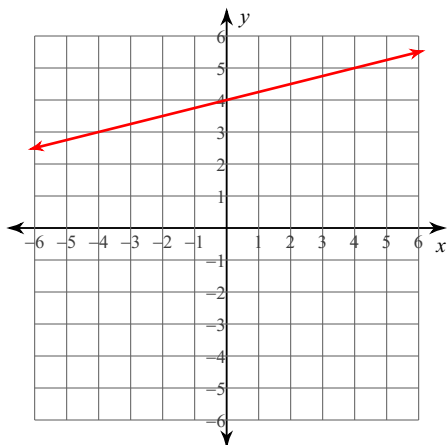
25) $7x + 5y = -10$



26) $x - 4y = 12$



27) $16 = 4y - x$



28) $-9y - 36 = -24x$

