

Review of Essential Skills—Part 4

Analytic Geometry: Lines and Line Segments, page 560

- (a) $d = \sqrt{65}$ (b) $m = -7, d = \sqrt{50}$
 (c) $m = -\frac{3}{2}, d = \frac{\sqrt{13}}{8}$ (d) $m = 2, d = \sqrt{80}$
- (a) $y = -\frac{2}{3}x + \frac{4}{3}$ (b) $y = \frac{3}{5}x + 6$
 (c) $y = \frac{5}{7}x - \frac{34}{7}$ (d) $y = \frac{8}{5}x - 8$
- (a) $x^2 + y^2 = 25$ (b) $x^2 + y^2 = \frac{64}{9}$ (c) $x^2 + y^2 = 0.09$
- $y \pm 12$
- (a) parallel (b) perpendicular (c) perpendicular
 (d) neither (e) parallel
- (a) l_1, l_3 (b) l_1, l_2
- (a) l_1, l_2 or l_1, l_3 (b) l_1, l_2
- (a) $(0, 24)$ (b) 10 (c) $x^2 + (y - 24)^2 = 100$
- $y = \frac{7}{4}x - \frac{29}{8}$
- $y = -x + 1$

Solving a System of Linear Equations, page 564

- (a) $(3, 2)$ (b) $(5, -10)$ (c) $(7, 3)$
- (a) two straight lines intersecting at $(0, 3)$, one passing through $(4, 0)$, the other through $(4.5, 0)$
 (b) two straight lines intersecting at $(0, -4)$, one passing through $(-4, 0)$, the other through $(2, 0)$
 (c) two straight lines intersecting at $(\frac{11}{7}, \frac{6}{7})$, one passing through $(2, 0)$, the other through $(-1, 0)$
 (d) two straight lines intersecting at $(-1, 1)$, one passing through $(-1.5, 0)$, the other through $(1, 0)$
- (a) $x = 12 + 3y$ (b) $x = 15 + 4y$ (c) $y = 12 - 2x$
 (d) $y = 8x - 4$ (e) $x = y - 9$ (f) $y = 2x - \frac{4}{3}$
 (g) $x = \frac{12}{15}y - \frac{14}{15}$ (h) $y = -\frac{5}{2}x - 5$ (i) $y = 12 - \frac{3}{4}x$
- (a) x (b) y (c) y (d) x
- (a) $(1, -1)$ (b) $(6, 9)$ (c) $(6, -6)$ (d) $(2, 1)$
- (a) $(4, 0)$ (b) $(-2, 3)$ (c) $(3, 4)$ (d) $(2, 8)$
- (a) $(1, 1)$ (b) $(8, -1)$ (c) $(\frac{11}{7}, \frac{30}{7})$ (d) $(-5, -15)$