1. Determine the equation for each line from the graph. Express your answer in slope-intercept form.

(a)

(b)

(c)

(d)

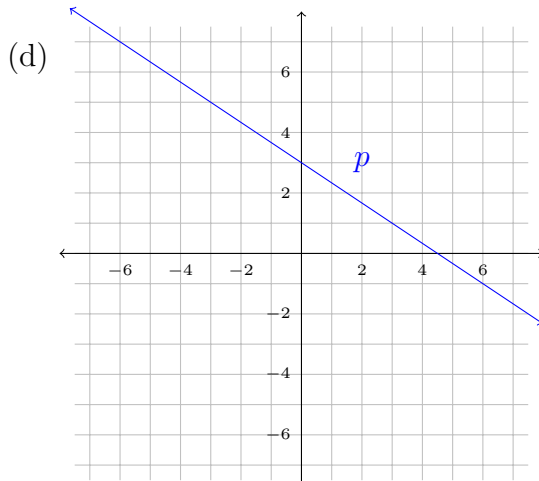

(e)

(f)
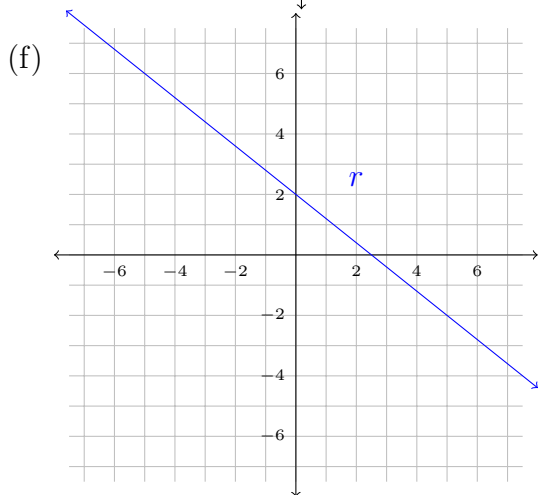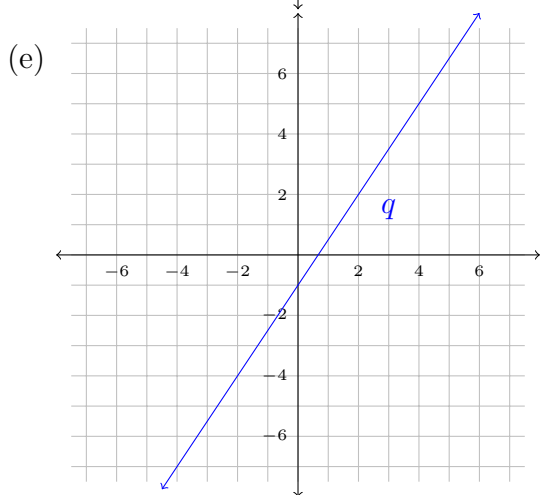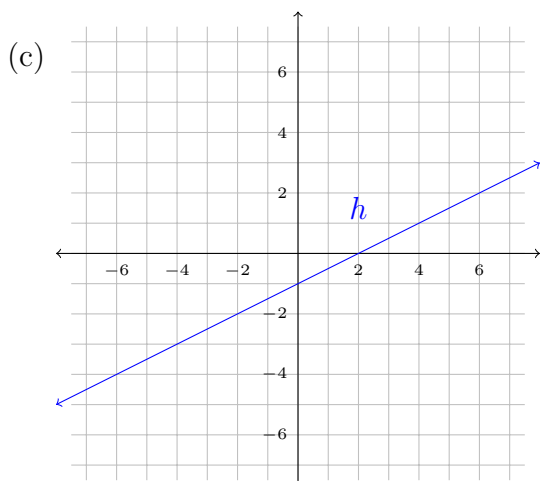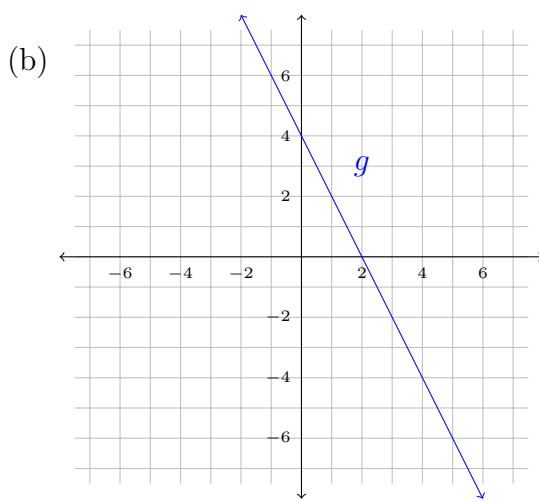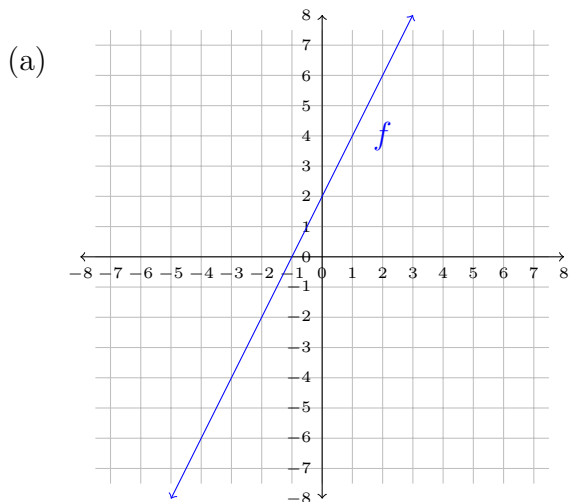
2. Write each equation in slope-intercept form.

(a) $4x + y = -8$

(b) $3x + y = -6$

(c) $-y = -3 - 3x$

(d) $0 = -x - \dfrac{3}{7}y - \dfrac{15}{7}$

(e) $2x - 3y = x + 8$

(f) $\dfrac{2y - 3}{6} = x - y$

3. Determine the equation of the line that passes through the given points, with the given slope. Express your answer in slope-intercept form.

(a) Passes through $(-4, 2)$ with slope $-\dfrac{5}{4}$.

(b) Passes through $(-1, -5)$ with slope $\dfrac{5}{3}$.

(c) Passes through $(3, 4)$ with slope $\dfrac{2}{3}$.

(d) Passes through $(-2, 7)$ with slope $-\dfrac{4}{9}$.

4. Determine the equation for the line with the given properties.

(a) Passes through $(1, 3)$, parallel to $y = \dfrac{1}{3}x + 1$.

(b) Passes through $(2, 4)$, parallel to $y = -\dfrac{2}{5}x - 2$.

(c) Passes through $(1, 0)$, parallel to $y = -\dfrac{4}{3}x + 2$.

(d) Passes through $(-2, 3)$, perpendicular to $y = -\dfrac{3}{2}x + 2$.

(e) Passes through $(1, 9)$, perpendicular to $y = 2x + 3$.

(f) Passes through $(0, 1)$, perpendicular to $y = -\dfrac{1}{3}x + 4$.

5. Determine the equation of the line that passes through the given points.

(a) The points $(2, 3)$ and $(-1, 4)$.

(b) The points $(2, 1)$ and $(1, 3)$.

(c) The points $(3, -9)$ and $(-2, 8)$.

(d) The points $(6, 8)$ and $(1, -1)$.

(e) The points $(3, 2)$ and $(2, 4)$.

(f) The points $(3, -4)$ and $(-2, 2)$.

(g) The points $(5, 2)$ and $(-3, 9)$.

(h) The points $(1, -1)$ and $(-2, 3)$.

Answers

1. (a) $y = 2x + 2$

   (b) $y = -2x + 4$

   (c) $y = \dfrac{1}{2}x - 1$

   (d) $y = -\dfrac{2}{3}x + 3$

   (e) $y = \dfrac{3}{2}x - 1$

   (f) $y = -\dfrac{4}{5}x + 2$

2. (a) $y = -4x - 8$

   (b) $y = -3x - 6$

   (c) $y = 3x + 3$

   (d) $y = -\dfrac{7}{3}x - 5$

   (e) $y = \dfrac{1}{3}x - \dfrac{8}{3}$

   (f) $y = \dfrac{3}{4}x + \dfrac{3}{8}$

3. (a) $y = \dfrac{-5}{4}x - 3$

   (b) $y = \dfrac{5}{3}x - 10/3$

   (c) $y = \dfrac{2}{3}x + 2$

   (d) $y = \dfrac{-4}{9}x + \dfrac{55}{9}$

4. (a) $y = \dfrac{1}{3}x + \dfrac{8}{3}$

   (b) $y = \dfrac{-2}{5}x + \dfrac{24}{5}$

   (c) $y = \dfrac{-4}{3}x + \dfrac{4}{3}$

   (d) $y = \dfrac{2}{3}x + \dfrac{13}{3}$

   (e) $y = \dfrac{-1}{2}x + \dfrac{19}{2}$

   (f) $y = 3x + 1$

5. (a) $y = \dfrac{-1}{3}x + \dfrac{11}{3}$

   (b) $y = -2x + 5$

   (c) $y = \dfrac{-17}{5}x + \dfrac{6}{5}$

   (d) $y = \dfrac{9}{5}x - \dfrac{14}{5}$

   (e) $y = -2x + 8$

   (f) $y = \dfrac{-6}{5}x - \dfrac{2}{5}$

   (g) $y = \dfrac{-7}{8}x + \dfrac{51}{8}$

   (h) $y = \dfrac{-4}{3}x + \dfrac{1}{3}$