Linear Equations (A)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: -4 Point: (-1,-3)

2. Slope: $-\frac{1}{9}$ Point: (-9,6)

3. Slope: 3 Point: (1,-1)

4. Slope: $-\frac{11}{4}$ Point: (4,-4)

5. Slope: undefined Point: (-4,-8)

6. Slope: $\frac{10}{9}$ Point: (-9,-9)

7. Slope: $\frac{4}{7}$ Point: (7,-3)

8. Slope: $\frac{3}{4}$ Point: (-4,6)

9. Slope: $-\frac{4}{3}$ Point: (-9,5)

10. Slope: $-\frac{13}{4}$ Point: (4,-8)

Linear Equations (A) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: -4 Point: (-1,-3)

   $y - (-3) = -4(x - (-1))$

   $y = -4x - 7$

2. Slope: $-\frac{1}{9}$ Point: (-9,6)

   $y - 6 = -\frac{1}{9}(x - (-9))$

   $y = -\frac{1}{9}x + 5$

3. Slope: 3 Point: (1,-1)

   $y - (-1) = 3(x - 1)$

   $y = 3x - 4$

4. Slope: $-\frac{11}{4}$ Point: (4,-4)

   $y - (-4) = -\frac{11}{4}(x - 4)$

   $y = -\frac{11}{4}x + 7$

5. Slope: undefined Point: (-4,-8)

   $x = -4$

6. Slope: $\frac{10}{9}$ Point: (-9,-9)

   $y - (-9) = \frac{10}{9}(x - (-9))$

   $y = \frac{10}{9}x + 1$

7. Slope: $\frac{4}{7}$ Point: (7,-3)

   $y - (-3) = \frac{4}{7}(x - 7)$

   $y = \frac{4}{7}x - 7$

8. Slope: $\frac{3}{4}$ Point: (-4,6)

   $y - 6 = \frac{3}{4}(x - (-4))$

   $y = \frac{3}{4}x + 9$

9. Slope: $-\frac{4}{3}$ Point: (-9,5)

   $y - 5 = -\frac{4}{3}(x - (-9))$

   $y = -\frac{4}{3}x - 7$

10. Slope: $-\frac{13}{4}$ Point: (4,-8)

    $y - (-8) = -\frac{13}{4}(x - 4)$

    $y = -\frac{13}{4}x + 5$

Linear Equations (B)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{7}{8}$ Point: (-8,-7)

2. Slope: -1 Point: (-6,7)

3. Slope: $\frac{1}{2}$ Point: (2,7)

4. Slope: 4 Point: (1,2)

5. Slope: -1 Point: (-2,-2)

6. Slope: $-\frac{1}{2}$ Point: (8,-7)

7. Slope: 1 Point: (3,-1)

8. Slope: $-\frac{7}{8}$ Point: (8,1)

9. Slope: -4 Point: (-2,2)

10. Slope: 0 Point: (-2,-1)

Linear Equations (B) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{7}{8}$ Point: (-8,-7)

   $y - (-7) = \frac{7}{8}(x - (-8))$

   $y = \frac{7}{8}x$

2. Slope: -1 Point: (-6,7)

   $y - 7 = -1(x - (-6))$

   $y = -x + 1$

3. Slope: $\frac{1}{2}$ Point: (2,7)

   $y - 7 = \frac{1}{2}(x - 2)$

   $y = \frac{1}{2}x + 6$

4. Slope: 4 Point: (1,2)

   $y - 2 = 4(x - 1)$

   $y = 4x - 2$

5. Slope: -1 Point: (-2,-2)

   $y - (-2) = -1(x - (-2))$

   $y = -x - 4$

6. Slope: $-\frac{1}{2}$ Point: (8,-7)

   $y - (-7) = -\frac{1}{2}(x - 8)$

   $y = -\frac{1}{2}x - 3$

7. Slope: 1 Point: (3,-1)

   $y - (-1) = 1(x - 3)$

   $y = x - 4$

8. Slope: $-\frac{7}{8}$ Point: (8,1)

   $y - 1 = -\frac{7}{8}(x - 8)$

   $y = -\frac{7}{8}x + 8$

9. Slope: -4 Point: (-2,2)

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

   $y = -4x - 6$

10. Slope: 0 Point: (-2,-1)

    $y - (-1) = 0(x - (-2))$

    $y = -1$

Linear Equations (C)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{13}{3}$ Point: (3,8)

2. Slope: 13 Point: (1,7)

3. Slope: 11 Point: (-1,-9)

4. Slope: $\frac{9}{7}$ Point: (-7,-2)

5. Slope: 6 Point: (-1,-7)

6. Slope: undefined Point: (5,-5)

7. Slope: $\frac{9}{2}$ Point: (2,3)

8. Slope: $-\frac{5}{3}$ Point: (-3,2)

9. Slope: $\frac{4}{3}$ Point: (9,6)

10. Slope: $-\frac{11}{6}$ Point: (-6,5)

Linear Equations (C) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{13}{3}$ Point: (3,8)

   $y - 8 = \frac{13}{3}(x - 3)$

   $y = \frac{13}{3}x - 5$

2. Slope: 13 Point: (1,7)

   $y - 7 = 13(x - 1)$

   $y = 13x - 6$

3. Slope: 11 Point: (-1,-9)

   $y - (-9) = 11(x - (-1))$

   $y = 11x + 2$

4. Slope: $\frac{9}{7}$ Point: (-7,-2)

   $y - (-2) = \frac{9}{7}(x - (-7))$

   $y = \frac{9}{7}x + 7$

5. Slope: 6 Point: (-1,-7)

   $y - (-7) = 6(x - (-1))$

   $y = 6x - 1$

6. Slope: undefined Point: (5,-5)

   $x = 5$

7. Slope: $\frac{9}{2}$ Point: (2,3)

   $y - 3 = \frac{9}{2}(x - 2)$

   $y = \frac{9}{2}x - 6$

8. Slope: $-\frac{5}{3}$ Point: (-3,2)

   $y - 2 = -\frac{5}{3}(x - (-3))$

   $y = -\frac{5}{3}x - 3$

9. Slope: $\frac{4}{3}$ Point: (9,6)

   $y - 6 = \frac{4}{3}(x - 9)$

   $y = \frac{4}{3}x - 6$

10. Slope: $-\frac{11}{6}$ Point: (-6,5)

    $y - 5 = -\frac{11}{6}(x - (-6))$

    $y = -\frac{11}{6}x - 6$

Linear Equations (D)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: -15 Point: (1,-7)

2. Slope: undefined Point: (2,-2)

3. Slope: 4 Point: (-2,-1)

4. Slope: $\frac{7}{5}$ Point: (-5,-1)

5. Slope: $-\frac{7}{5}$ Point: (5,1)

6. Slope: 4 Point: (-4,-7)

7. Slope: 2 Point: (8,9)

8. Slope: $\frac{5}{2}$ Point: (2,1)

9. Slope: $\frac{1}{2}$ Point: (2,4)

10. Slope: $-\frac{13}{3}$ Point: (3,-5)

Linear Equations (D) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: -15 Point: (1,-7)

   $y - (-7) = -15(x - 1)$

   $y = -15x + 8$

2. Slope: undefined Point: (2,-2)

   $x = 2$

3. Slope: 4 Point: (-2,-1)

   $y - (-1) = 4(x - (-2))$

   $y = 4x + 7$

4. Slope: $\frac{7}{5}$ Point: (-5,-1)

   $y - (-1) = \frac{7}{5}(x - (-5))$

   $y = \frac{7}{5}x + 6$

5. Slope: $-\frac{7}{5}$ Point: (5,1)

   $y - 1 = -\frac{7}{5}(x - 5)$

   $y = -\frac{7}{5}x + 8$

6. Slope: 4 Point: (-4,-7)

   $y - (-7) = 4(x - (-4))$

   $y = 4x + 9$

7. Slope: 2 Point: (8,9)

   $y - 9 = 2(x - 8)$

   $y = 2x - 7$

8. Slope: $\frac{5}{2}$ Point: (2,1)

   $y - 1 = \frac{5}{2}(x - 2)$

   $y = \frac{5}{2}x - 4$

9. Slope: $\frac{1}{2}$ Point: (2,4)

   $y - 4 = \frac{1}{2}(x - 2)$

   $y = \frac{1}{2}x + 3$

10. Slope: $-\frac{13}{3}$ Point: (3,-5)

    $y - (-5) = -\frac{13}{3}(x - 3)$

    $y = -\frac{13}{3}x + 8$

Linear Equations (E)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: $-\frac{9}{7}$ Point: (-7,4)

2. Slope: $\frac{1}{8}$ Point: (8,0)

3. Slope: $-\frac{1}{4}$ Point: (-4,2)

4. Slope: $\frac{1}{8}$ Point: (8,-2)

5. Slope: $\frac{7}{4}$ Point: (4,6)

6. Slope: $-\frac{1}{3}$ Point: (-6,9)

7. Slope: -3 Point: (-2,-3)

8. Slope: $\frac{7}{4}$ Point: (4,8)

9. Slope: $-\frac{5}{9}$ Point: (-9,4)

10. Slope: $-\frac{1}{3}$ Point: (3,-6)

Linear Equations (E) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: $-\frac{9}{7}$ Point: (-7,4)

   $y - 4 = -\frac{9}{7}(x - (-7))$

   $y = -\frac{9}{7}x - 5$

2. Slope: $\frac{1}{8}$ Point: (8,0)

   $y - 0 = \frac{1}{8}(x - 8)$

   $y = \frac{1}{8}x - 1$

3. Slope: $-\frac{1}{4}$ Point: (-4,2)

   $y - 2 = -\frac{1}{4}(x - (-4))$

   $y = -\frac{1}{4}x + 1$

4. Slope: $\frac{1}{8}$ Point: (8,-2)

   $y - (-2) = \frac{1}{8}(x - 8)$

   $y = \frac{1}{8}x - 3$

5. Slope: $\frac{7}{4}$ Point: (4,6)

   $y - 6 = \frac{7}{4}(x - 4)$

   $y = \frac{7}{4}x - 1$

6. Slope: $-\frac{1}{3}$ Point: (-6,9)

   $y - 9 = -\frac{1}{3}(x - (-6))$

   $y = -\frac{1}{3}x + 7$

7. Slope: -3 Point: (-2,-3)

   $y - (-3) = -3(x - (-2))$

   $y = -3x - 9$

8. Slope: $\frac{7}{4}$ Point: (4,8)

   $y - 8 = \frac{7}{4}(x - 4)$

   $y = \frac{7}{4}x + 1$

9. Slope: $-\frac{5}{9}$ Point: (-9,4)

   $y - 4 = -\frac{5}{9}(x - (-9))$

   $y = -\frac{5}{9}x - 1$

10. Slope: $-\frac{1}{3}$ Point: (3,-6)

    $y - (-6) = -\frac{1}{3}(x - 3)$

    $y = -\frac{1}{3}x - 5$

Linear Equations (F)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{2}{3}$ Point: (6,4)

2. Slope: $-\frac{5}{4}$ Point: (8,-6)

3. Slope: 7 Point: (1,7)

4. Slope: $\frac{4}{9}$ Point: (9,2)

5. Slope: $\frac{13}{3}$ Point: (-3,-6)

6. Slope: $\frac{2}{9}$ Point: (9,-2)

7. Slope: -3 Point: (1,-2)

8. Slope: 4 Point: (-1,1)

9. Slope: 2 Point: (4,7)

10. Slope: $-\frac{3}{8}$ Point: (8,-1)

Linear Equations (F) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{2}{3}$ Point: (6,4)

   $y - 4 = \frac{2}{3}(x - 6)$

   $y = \frac{2}{3}x$

2. Slope: $-\frac{5}{4}$ Point: (8,-6)

   $y - (-6) = -\frac{5}{4}(x - 8)$

   $y = -\frac{5}{4}x + 4$

3. Slope: 7 Point: (1,7)

   $y - 7 = 7(x - 1)$

   $y = 7x$

4. Slope: $\frac{4}{9}$ Point: (9,2)

   $y - 2 = \frac{4}{9}(x - 9)$

   $y = \frac{4}{9}x - 2$

5. Slope: $\frac{13}{3}$ Point: (-3,-6)

   $y - (-6) = \frac{13}{3}(x - (-3))$

   $y = \frac{13}{3}x + 7$

6. Slope: $\frac{2}{9}$ Point: (9,-2)

   $y - (-2) = \frac{2}{9}(x - 9)$

   $y = \frac{2}{9}x - 4$

7. Slope: -3 Point: (1,-2)

   $y - (-2) = -3(x - 1)$

   $y = -3x + 1$

8. Slope: 4 Point: (-1,1)

   $y - 1 = 4(x - (-1))$

   $y = 4x + 5$

9. Slope: 2 Point: (4,7)

   $y - 7 = 2(x - 4)$

   $y = 2x - 1$

10. Slope: $-\frac{3}{8}$ Point: (8,-1)

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

    $y = -\frac{3}{8}x + 2$

Linear Equations (G)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{5}{3}$ Point: (-6,-6)

2. Slope: $-\frac{4}{7}$ Point: (-7,2)

3. Slope: $\frac{10}{7}$ Point: (7,2)

4. Slope: $-\frac{3}{7}$ Point: (7,-7)

5. Slope: -3 Point: (2,3)

6. Slope: $-\frac{2}{3}$ Point: (-9,0)

7. Slope: $-\frac{7}{4}$ Point: (-8,7)

8. Slope: undefined Point: (-1,4)

9. Slope: 2 Point: (-2,4)

10. Slope: -4 Point: (-1,5)

Linear Equations (G) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{5}{3}$ Point: (-6,-6)

   $y - (-6) = \frac{5}{3}(x - (-6))$

   $y = \frac{5}{3}x + 4$

2. Slope: $-\frac{4}{7}$ Point: (-7,2)

   $y - 2 = -\frac{4}{7}(x - (-7))$

   $y = -\frac{4}{7}x - 2$

3. Slope: $\frac{10}{7}$ Point: (7,2)

   $y - 2 = \frac{10}{7}(x - 7)$

   $y = \frac{10}{7}x - 8$

4. Slope: $-\frac{3}{7}$ Point: (7,-7)

   $y - (-7) = -\frac{3}{7}(x - 7)$

   $y = -\frac{3}{7}x - 4$

5. Slope: -3 Point: (2,3)

   $y - 3 = -3(x - 2)$

   $y = -3x + 9$

6. Slope: $-\frac{2}{3}$ Point: (-9,0)

   $y - 0 = -\frac{2}{3}(x - (-9))$

   $y = -\frac{2}{3}x - 6$

7. Slope: $-\frac{7}{4}$ Point: (-8,7)

   $y - 7 = -\frac{7}{4}(x - (-8))$

   $y = -\frac{7}{4}x - 7$

8. Slope: undefined Point: (-1,4)

   $x = -1$

9. Slope: 2 Point: (-2,4)

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

   $y = 2x + 8$

10. Slope: -4 Point: (-1,5)

    $y - 5 = -4(x - (-1))$

    $y = -4x + 1$

Linear Equations (H)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: -1 Point: (-1,3)

2. Slope: $\frac{11}{7}$ Point: (7,7)

3. Slope: $-\frac{5}{2}$ Point: (-4,3)

4. Slope: undefined Point: (6,-6)

5. Slope: $\frac{1}{4}$ Point: (4,-6)

6. Slope: $-\frac{11}{9}$ Point: (9,-3)

7. Slope: $\frac{1}{4}$ Point: (-4,-3)

8. Slope: $\frac{9}{4}$ Point: (-4,-7)

9. Slope: $-\frac{1}{9}$ Point: (-9,9)

10. Slope: $\frac{5}{9}$ Point: (-9,2)

Linear Equations (H) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: -1 Point: (-1,3)

   $y - 3 = -1(x - (-1))$

   $y = -x + 2$

2. Slope: $\frac{11}{7}$ Point: (7,7)

   $y - 7 = \frac{11}{7}(x - 7)$

   $y = \frac{11}{7}x - 4$

3. Slope: $-\frac{5}{2}$ Point: (-4,3)

   $y - 3 = -\frac{5}{2}(x - (-4))$

   $y = -\frac{5}{2}x - 7$

4. Slope: undefined Point: (6,-6)

   $x = 6$

5. Slope: $\frac{1}{4}$ Point: (4,-6)

   $y - (-6) = \frac{1}{4}(x - 4)$

   $y = \frac{1}{4}x - 7$

6. Slope: $-\frac{11}{9}$ Point: (9,-3)

   $y - (-3) = -\frac{11}{9}(x - 9)$

   $y = -\frac{11}{9}x + 8$

7. Slope: $\frac{1}{4}$ Point: (-4,-3)

   $y - (-3) = \frac{1}{4}(x - (-4))$

   $y = \frac{1}{4}x - 2$

8. Slope: $\frac{9}{4}$ Point: (-4,-7)

   $y - (-7) = \frac{9}{4}(x - (-4))$

   $y = \frac{9}{4}x + 2$

9. Slope: $-\frac{1}{9}$ Point: (-9,9)

   $y - 9 = -\frac{1}{9}(x - (-9))$

   $y = -\frac{1}{9}x + 8$

10. Slope: $\frac{5}{9}$ Point: (-9,2)

    $y - 2 = \frac{5}{9}(x - (-9))$

    $y = \frac{5}{9}x + 7$

Linear Equations (I)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{7}{3}$ Point: (-3,-9)

2. Slope: $-\frac{11}{2}$ Point: (-2,4)

3. Slope: $\frac{1}{4}$ Point: (-4,2)

4. Slope: $-\frac{7}{3}$ Point: (-3,8)

5. Slope: -10 Point: (-1,8)

6. Slope: -11 Point: (-1,6)

7. Slope: $-\frac{5}{7}$ Point: (-7,7)

8. Slope: $-\frac{1}{2}$ Point: (8,-8)

9. Slope: $-\frac{17}{9}$ Point: (9,-8)

10. Slope: 1 Point: (-2,-6)

Linear Equations (I) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: $\frac{7}{3}$ Point: (-3,-9)

   $y - (-9) = \frac{7}{3}(x - (-3))$

   $y = \frac{7}{3}x - 2$

2. Slope: $-\frac{11}{2}$ Point: (-2,4)

   $y - 4 = -\frac{11}{2}(x - (-2))$

   $y = -\frac{11}{2}x - 7$

3. Slope: $\frac{1}{4}$ Point: (-4,2)

   $y - 2 = \frac{1}{4}(x - (-4))$

   $y = \frac{1}{4}x + 3$

4. Slope: $-\frac{7}{3}$ Point: (-3,8)

   $y - 8 = -\frac{7}{3}(x - (-3))$

   $y = -\frac{7}{3}x + 1$

5. Slope: -10 Point: (-1,8)

   $y - 8 = -10(x - (-1))$

   $y = -10x - 2$

6. Slope: -11 Point: (-1,6)

   $y - 6 = -11(x - (-1))$

   $y = -11x - 5$

7. Slope: $-\frac{5}{7}$ Point: (-7,7)

   $y - 7 = -\frac{5}{7}(x - (-7))$

   $y = -\frac{5}{7}x + 2$

8. Slope: $-\frac{1}{2}$ Point: (8,-8)

   $y - (-8) = -\frac{1}{2}(x - 8)$

   $y = -\frac{1}{2}x - 4$

9. Slope: $-\frac{17}{9}$ Point: (9,-8)

   $y - (-8) = -\frac{17}{9}(x - 9)$

   $y = -\frac{17}{9}x + 9$

10. Slope: 1 Point: (-2,-6)

    $y - (-6) = 1(x - (-2))$

    $y = x - 4$

Linear Equations (J)

Point-Slope Form ($y - y_1 = m(x - x_1)$)

Write the equation of each line in point-slope form then solve for y.

1. Slope: -3 Point: (3,-9)

2. Slope: $-\frac{3}{4}$ Point: (-8,8)

3. Slope: $-\frac{1}{9}$ Point: (9,-6)

4. Slope: 0 Point: (-6,0)

5. Slope: -5 Point: (1,1)

6. Slope: undefined Point: (-2,-10)

7. Slope: 0 Point: (3,7)

8. Slope: $\frac{1}{5}$ Point: (5,4)

9. Slope: $-\frac{13}{4}$ Point: (-4,7)

10. Slope: $\frac{1}{3}$ Point: (-6,6)

Linear Equations (J) Answers

Point-Slope Form $(y - y_1 = m(x - x_1))$

Write the equation of each line in point-slope form then solve for y.

1. Slope: -3 Point: (3,-9)

   $y - (-9) = -3(x - 3)$

   $y = -3x$

2. Slope: $-\frac{3}{4}$ Point: (-8,8)

   $y - 8 = -\frac{3}{4}(x - (-8))$

   $y = -\frac{3}{4}x + 2$

3. Slope: $-\frac{1}{9}$ Point: (9,-6)

   $y - (-6) = -\frac{1}{9}(x - 9)$

   $y = -\frac{1}{9}x - 5$

4. Slope: 0 Point: (-6,0)

   $y - 0 = 0(x - (-6))$

   $y = 0$

5. Slope: -5 Point: (1,1)

   $y - 1 = -5(x - 1)$

   $y = -5x + 6$

6. Slope: undefined Point: (-2,-10)

   $x = -2$

7. Slope: 0 Point: (3,7)

   $y - 7 = 0(x - 3)$

   $y = 7$

8. Slope: $\frac{1}{5}$ Point: (5,4)

   $y - 4 = \frac{1}{5}(x - 5)$

   $y = \frac{1}{5}x + 3$

9. Slope: $-\frac{13}{4}$ Point: (-4,7)

   $y - 7 = -\frac{13}{4}(x - (-4))$

   $y = -\frac{13}{4}x - 6$

10. Slope: $\frac{1}{3}$ Point: (-6,6)

    $y - 6 = \frac{1}{3}(x - (-6))$

    $y = \frac{1}{3}x + 8$