

Q1P5

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Date _____ Period _____

Write the slope-intercept form of the equation of the line through the given points. Find the distance between the two points and the coordinate of the midpoint of a line connecting the two points.

1) through: $(0, 5)$ and $(-3, 0)$

2) through: $(5, 4)$ and $(-1, 5)$

3) through: $(-3, 5)$ and $(-1, -1)$

4) through: $(5, -1)$ and $(4, -5)$

Write the standard form of the equation of the line through the given points.

5) through: $(-1, -4)$ and $(2, -2)$

6) through: $(0, -1)$ and $(2, 2)$

7) through: $(-1, 2)$ and $(0, 2)$

8) through: $(-1, -5)$ and $(4, -2)$

Write the point-slope form of the equation of the line through the given points.

9) through: $(-4, -4)$ and $(-2, 0)$

10) through: $(-2, 4)$ and $(5, 0)$

11) through: $(2, -1)$ and $(-3, -3)$

12) through: $(5, -2)$ and $(-2, 2)$

Write the slope-intercept form of the equation of the line described.

13) through: $(-2, 0)$, parallel to $y = \frac{2}{3}x - 5$

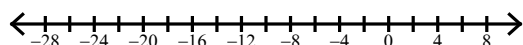
14) through: $(3, 5)$, parallel to $y = \frac{1}{2}x + 2$

15) through: $(-3, 2)$, perp. to $y = -4x + 4$

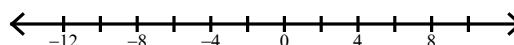
16) through: $(-3, -5)$, perp. to $y = -\frac{7}{8}x + 5$

Solve each inequality and graph its solution on a number line. How would you graph it on an x-y coordinate plane? Tip: see example problem on page 342 of textbook.

17) $|x + 10| > 14$



18) $|x + 1| \leq 9$



Perform the indicated operation.

19) $g(t) = 4t + 2$
 $f(t) = t^2 - 4t$
Find $\left(\frac{g}{f}\right)(3)$

20) $f(x) = x^2 - 5 + 2x$
 $g(x) = -4x - 1$
Find $(-3f - 2g)(5)$

21) $g(x) = -3x + 1$
 $f(x) = 2x$
Find $(g \cdot f)(4)$

22) $g(x) = 2x$
 $h(x) = x^2 - 2$
Find $(g + h)(6)$

23) $g(t) = t - 1$
 $f(t) = t^3 + 3t^2$
Find $(g \circ f)(-3)$

24) $g(n) = 4n + 1$
 $h(n) = n^3 + n$
Find $(g + h)(-1)$

25) $g(x) = x^2 + 2x$
 $f(x) = 2x + 4$
Find $(g \cdot f)(2)$

26) $g(x) = 3x - 1$
 $h(x) = 2x + 4$
Find $(g - h)(0)$

27) $g(t) = t - 4$
 $h(t) = t^3 - 2t$
Find $(g \cdot h)(-t)$

28) $f(x) = -4x - 4$
 $g(x) = x - 1$
Find $(f + g)(x + 2)$

29) $g(a) = a - 3$
 $f(a) = 2a^2 - 4a$
Find $(g - f)(3a)$

30) $g(n) = 4n - 1$
 $f(n) = n + 5$
Find $(g \circ f)\left(\frac{n}{2}\right)$

31) $g(n) = 4n - 5$
 $h(n) = 4n + 4$
Find $\left(\frac{g}{h}\right)(-3n)$

32) $g(a) = a - 5$
 $h(a) = a^2 + 2a$
Find $(4g - 4h)(a^2)$

33) $g(x) = 4x$
 $h(x) = 3x^3 - 4x^2 - 2x$
Find $(g \cdot h)(x - 1)$

34) $g(x) = x - 1$
 $h(x) = -x - 5$
Find $(g - h)(4t)$

Answers to Q1P5 (ID: 1)

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

2) $y = -\frac{1}{6}x + \frac{29}{6}$

3) $y = -3x - 4$

4) $y = 4x - 21$

5) $2x - 3y = 10$

6) $3x - 2y = 2$

7) $y = 2$

8) $3x - 5y = 22$

9) $y + 4 = 2(x + 4)$

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

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

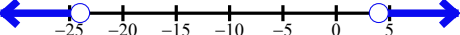
12) $y + 2 = -\frac{4}{7}(x - 5)$

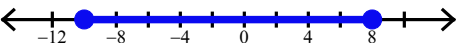
13) $y = \frac{2}{3}x + \frac{4}{3}$

14) $y = \frac{1}{2}x + \frac{7}{2}$

15) $y = \frac{1}{4}x + \frac{11}{4}$

16) $y = \frac{8}{7}x - \frac{11}{7}$

17) $x > 4$ or $x < -24$: 

18) $-10 \leq x \leq 8$: 

19) $-\frac{14}{3}$

20) -48

21) -88

22) 46

23) -1

24) -5

25) 64

26) -5

27) $t^4 + 4t^3 - 2t^2 - 8t$

28) $-3x - 11$

29) $-18a^2 + 15a - 3$

30) $2n + 19$

31) $\frac{-12n - 5}{-12n + 4}$

32) $-4a^4 - 4a^2 - 20$

33) $12x^4 - 64x^3 + 112x^2 - 80x + 20$

34) $8t + 4$