Math 102
Quiz 3 Preparation Ch.2.1 to 2.3 v01
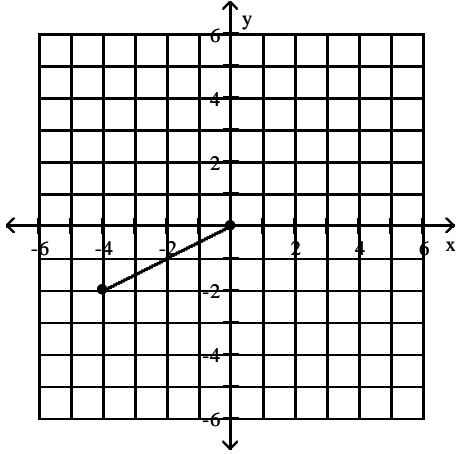NO BOOK/ NO NOTES/YES CALCUATOR
Dressler Fall 2016

Name_____

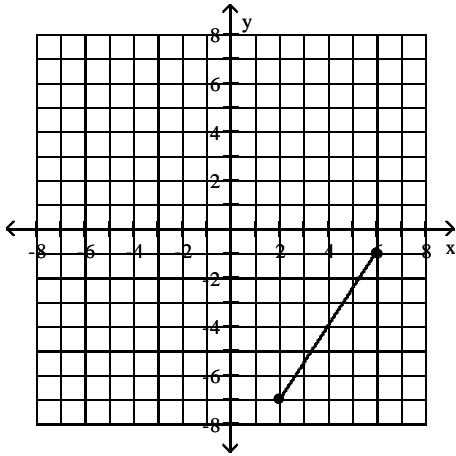**Find the distance d(P$_1$, P$_2$) between the points P$_1$ and P$_2$.**

1)

1) _____

2)

2) _____

3)

4)
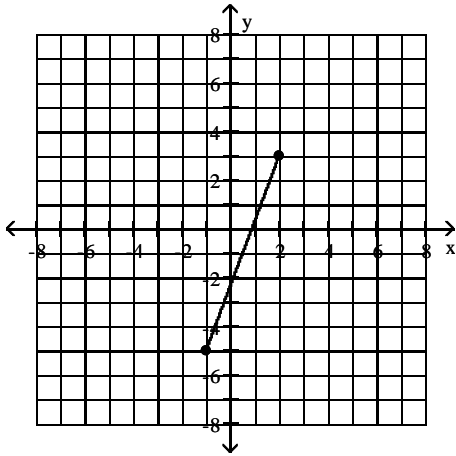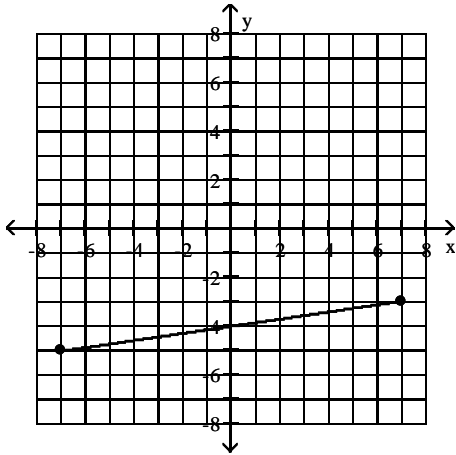
5) $P_1 = (4, 2)$; $P_2 = (-3, -3)$

6) $P_1 = (5, -5)$; $P_2 = (7, -1)$

7) $P_1 = (-2, -5)$; $P_2 = (5, -4)$

Find the midpoint of the line segment joining the points P_1 and P_2.

8) $P_1 = (9, 1);\ P_2 = (1, -6)$

8) _____

9) $P_1 = (2, 4);\ P_2 = (-8, -1)$

9) _____

10) $P_1 = (7, 1);\ P_2 = (-16, -16)$

10) _____

11) $P_1 = (y, 9);\ P_2 = (0, 7)$

11) _____

12) $P_1 = (y, 9);\ P_2 = (0, 8)$

12) _____

Find an equation of the line that has the given slope and contains the given point.

13) $m = 3,\ (7, 3)$

13) _____

14) $m = 3,\ (7, 4)$

14) _____

15) $m = -2,\ (8, 8)$

15) _____

16) $m = 0,\ (-6, -8)$

16) _____

17) m = 0, (5, 2)   17) _____

18) m = $\frac{5}{6}$, (4, 8)   18) _____

19) m = $\frac{3}{4}$, (7, 7)   19) _____

20) m = $-\frac{8}{9}$, (4, 2)   20) _____

21) m = $-\frac{3}{5}$, (5, 2)   21) _____

Solve.

22) The average value of a certain type of automobile was $13,920 in 1993 and depreciated to   22) _____
$8940 in 1996. Let y be the average value of the automobile in the year x, where x = 0
represents 1993. Write a linear equation that models the value of the automobile in terms
of the year x.

23) The average value of a certain type of automobile was $14,760 in 1995 and depreciated to   23) _____
$7080 in 1999. Let y be the average value of the automobile in the year x, where x = 0
represents 1995. Write a linear equation that models the value of the automobile in terms
of the year x.

24) A faucet is used to add water to a large bottle that already contained some water. After it has been filling for 5 seconds, the gauge on the bottle indicates that it contains 20 ounces of water. After it has been filling for 13 seconds, the gauge indicates the bottle contains 44 ounces of water. Let y be the amount of water in the bottle x seconds after the faucet was turned on. Write a linear equation that models the amount of water in the bottle in terms of x.

24) _____

25) A faucet is used to add water to a large bottle that already contained some water. After it has been filling for 5 seconds, the gauge on the bottle indicates that it contains 12 ounces of water. After it has been filling for 11 seconds, the gauge indicates the bottle contains 24 ounces of water. Let y be the amount of water in the bottle x seconds after the faucet was turned on. Write a linear equation that models the amount of water in the bottle in terms of x.

25) _____

26) When making a telephone call using a calling card, a call lasting 5 minutes costs $1.70. A call lasting 15 minutes costs $4.20. Let y be the cost of making a call lasting x minutes using a calling card. Write a linear equation that models the cost of making a call lasting x minutes.

26) _____

27) When making a telephone call using a calling card, a call lasting 5 minutes costs $1.50. A call lasting 14 minutes costs $3.30. Let y be the cost of making a call lasting x minutes using a calling card. Write a linear equation that models the cost of making a call lasting x minutes.

27) _____

Find an equation of the line that contains the given point and is parallel to the given line.

28) $y = -\dfrac{1}{3}x + 2$, (2, 2)

28) _____

29) $y = -4x + 4$, (4, -2)

29) _____

30) $y = -\dfrac{1}{9}x + 5$, (3, 3)   30) _____

31) $7x - 8y = 10$, (5, 4)   31) _____

32) $6x + y = 9$, (5, 2)   32) _____
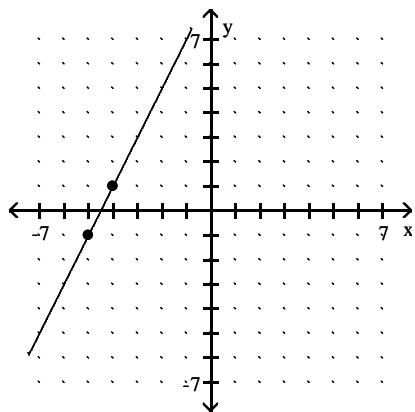
33) $3x + 4y = 34$, (6, 8)   33) _____
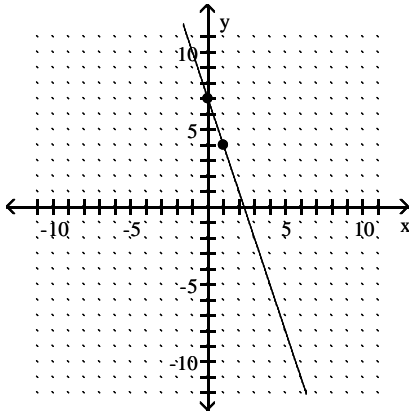
34) $2x - 3y = 10$, (7, 7)   34) _____
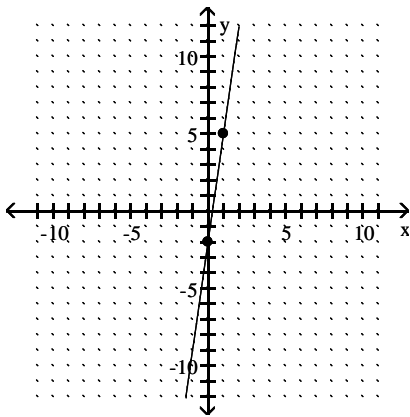
Find an equation for the line.
  35)   35) _____

36)

37)

1) $2\sqrt{5}$

2) $\sqrt{73}$

3) $2\sqrt{13}$

4) $10\sqrt{2}$

5) $\sqrt{74}$

6) $2\sqrt{5}$

7) $5\sqrt{2}$

8) $\left(5, -\dfrac{5}{2}\right)$

9) $\left(-3, \dfrac{3}{2}\right)$

10) $\left(-\dfrac{9}{2}, -\dfrac{15}{2}\right)$

11) $\left(\dfrac{y}{2}, 8\right)$

12) $\left(\dfrac{y}{2}, \dfrac{17}{2}\right)$

13) $y = 3x - 18$

14) $y = 3x - 17$

15) $y = -2x + 24$

16) $y = -8$

17) $y = 2$

18) $y = \dfrac{5}{6}x + \dfrac{14}{3}$

19) $y = \dfrac{3}{4}x + \dfrac{7}{4}$

20) $y = -\dfrac{8}{9}x + \dfrac{50}{9}$

21) $y = -\dfrac{3}{5}x + 5$

22) $y = -1660x + 13{,}920$

23) $y = -1920x + 14{,}760$

24) $y = 3x + 5$

25) $y = 2x + 2$

26) $y = 0.25x + 0.45$

27) $y = 0.2x + 0.5$

28) $y = -\dfrac{1}{3}x + \dfrac{8}{3}$

29) $y = -4x + 14$

30) $y = -\dfrac{1}{9}x + \dfrac{10}{3}$

31) $y = \dfrac{7}{8}x - \dfrac{3}{8}$

32) $y = -6x + 32$

33) $y = -\dfrac{3}{4}x + \dfrac{25}{2}$

34) $y = \dfrac{2}{3}x + \dfrac{7}{3}$

35) $y = 2x + 9$

36) $y = -3x + 7$

37) $y = 7x - 2$