Algebra 1

Name_____ ID: 1

Midterm Review 1

Date_____ Period____

Evaluate each expression.

1) $1 - -3 + 6$

2) $(12 \div 6)(-1)$

3) $(-15 \div -3)^2 - -6$

4) $(-1 + 3)(-2) + 1$

5) $3 + (5 - 6)((5)(4)) - 6$

6) $(2^3)(((-1)^2)(-4 + 3))$

7) $(-9) - (-7) - (-6) + 10$
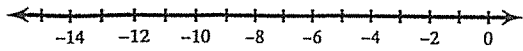
8) $5 \times \dfrac{30}{3} \times (-2)$

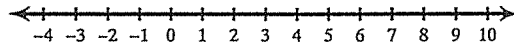**Simplify each expression.**

9) $-4 + 3(3 - 2p)$

10) $-9 + 2(r - 4)$
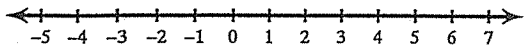
Solve each compound inequality and graph its solution.
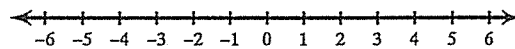
18) $-5n - 8 \geq 6 + 2n$ and $-7 - 6n < -5n + 5$

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<--+--+--+--+--+--+--+--+--+--+--+--+--+--+-->
     -14   -12   -10   -8    -6    -4    -2    0
```
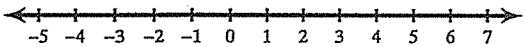
19) $6p + 10 \geq 2 + 7p \geq -1 + 4p$

```
<--+--+--+--+--+--+--+--+--+--+--+--+--+--+-->
  -4 -3 -2 -1 0  1  2  3  4  5  6  7  8  9  10
```

20) $-3p - 6 < 10 + 5p \leq -7p + 10$

```
<--+--+--+--+--+--+--+--+--+--+--+--+--+-->
  -5 -4 -3 -2 -1 0  1  2  3  4  5  6  7
```

21) $4 - x > x + 8$ or $6 - 5x \leq 3 - 2x$

```
<--+--+--+--+--+--+--+--+--+--+--+--+--+-->
  -6 -5 -4 -3 -2 -1 0  1  2  3  4  5  6
```

22) $-4 + 8x \geq 7x - 3$ or $-9x + 1 > 7 - 3x$

```
<--+--+--+--+--+--+--+--+--+--+--+--+--+-->
  -5 -4 -3 -2 -1 0  1  2  3  4  5  6  7
```

23) $2r + 3 < -2r - 5$ or $2r + 1 > 7 - 4r$

```
<--+--+--+--+--+--+--+--+--+--+--+--+--+-->
  -6 -5 -4 -3 -2 -1 0  1  2  3  4  5  6
```

24) $10b + 1 \leq 8b + 1$ or $2b - 2 \leq 4b - 10$

```
<--+--+--+--+--+--+--+--+--+--+--+--+--+-->
  -4 -3 -2 -1 0  1  2  3  4  5  6  7  8
```

25) $8x + 3 \leq 2x + 3$ or $9 - 10x < -7 - 9x$

```
<--+--+--+--+--+--+--+--+--+--+--+--+-->
  -4 -2  0  2  4  6  8  10 12 14 16 18
```

Algebra 1
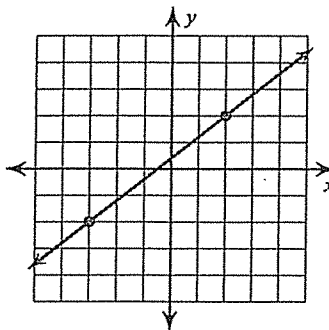
Name_____ ID: 1

Midterm Review 2

Date_____ Period_____
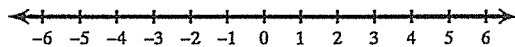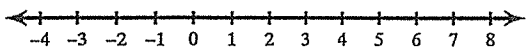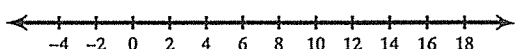
Find the slope of each line.

1)
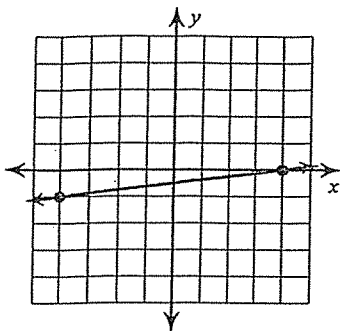
2)

Find the slope of the line through each pair of points.
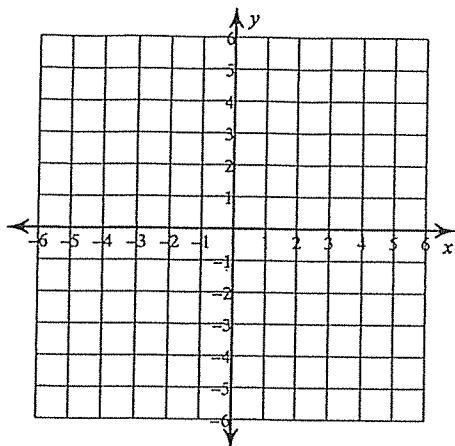
3) $(20, -15), (-4, -3)$

4) $(12, 14), (-14, -17)$

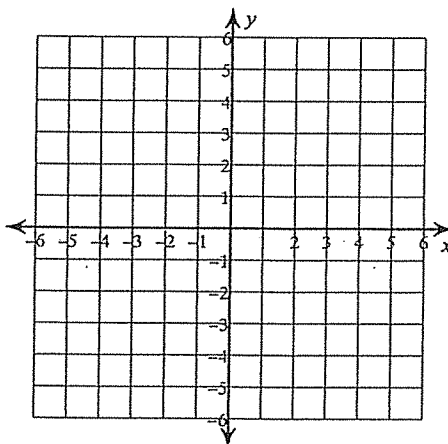**Find the slope of each line.**

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

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

Sketch the graph of each line.
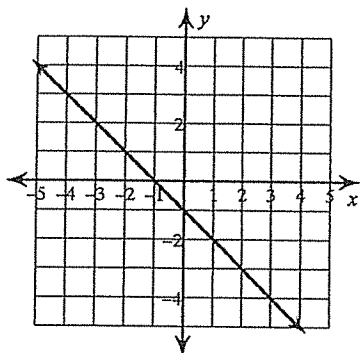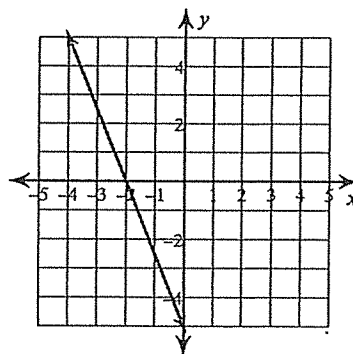
17) $15 + 3y = -15x$

18) $0 = x + 4y$

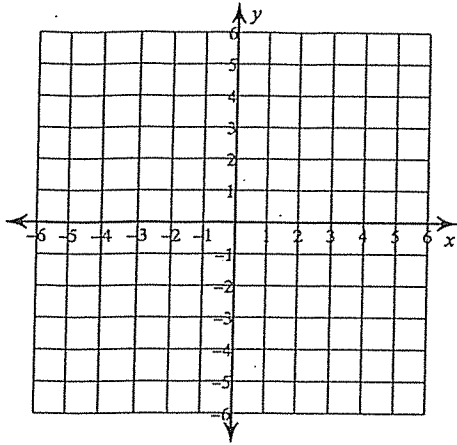**Write the slope-intercept form of the equation of each line.**

19)

20)

Write the slope-intercept form of the equation of each line given the slope and y-intercept.
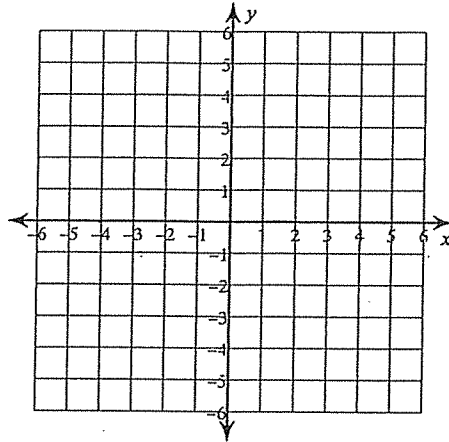
21) Slope $= -7$,   y-intercept $= 5$

22) Slope $= \dfrac{2}{5}$,   y-intercept $= 4$
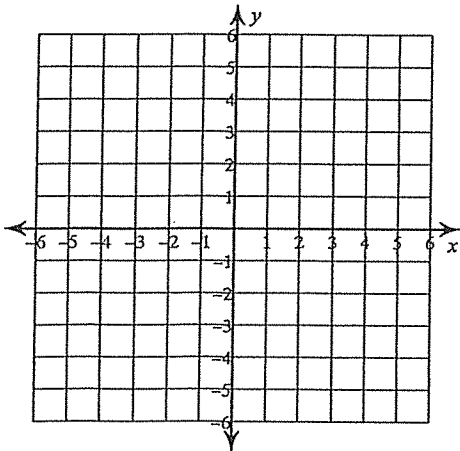
Sketch the graph of each linear inequality.

33) $y < \dfrac{1}{3}x + 2$

34) $y > -4x$

35) $y \le \dfrac{4}{3}x + 5$
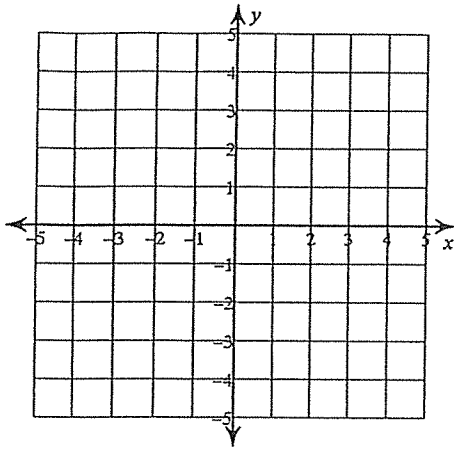
Algebra 1

Name_____ ID: 1

Midterm Review 3

Date_____ Period____

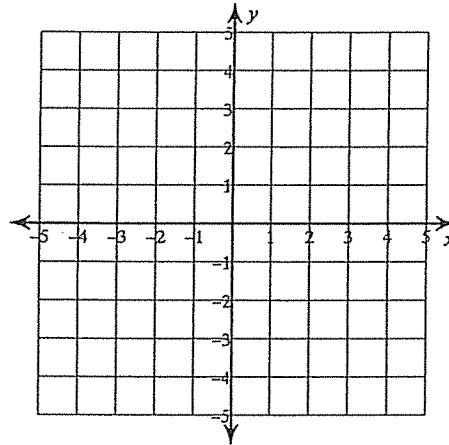**Solve each system by graphing.**

1) $y = -\dfrac{7}{2}x + 4$

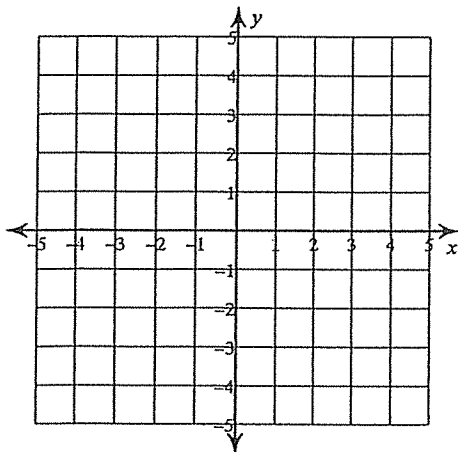$y = -\dfrac{1}{2}x - 2$

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

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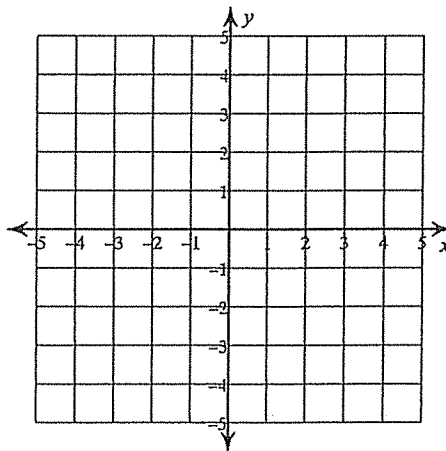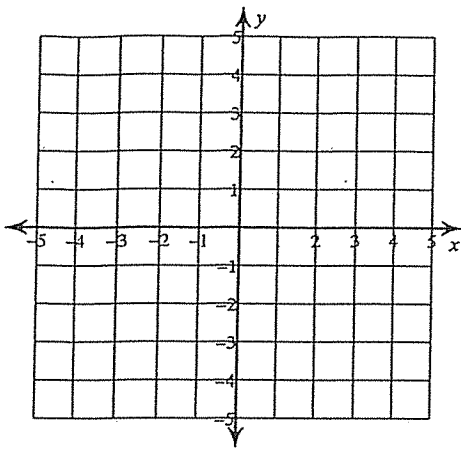

3) $y = -5x + 3$
$y = -x - 1$

4) $y = x + 4$
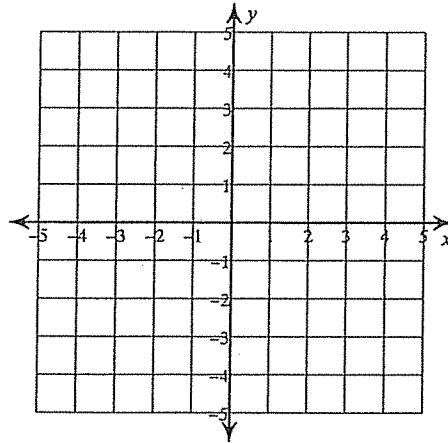$y = 1$

Sketch the solution to each system of inequalities.
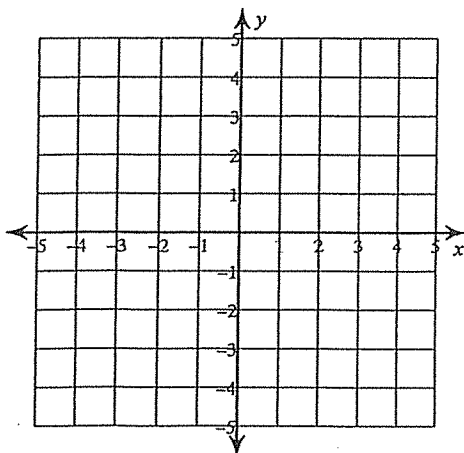
14) $y < 2x - 2$

$\quad y > \dfrac{1}{2}x + 1$

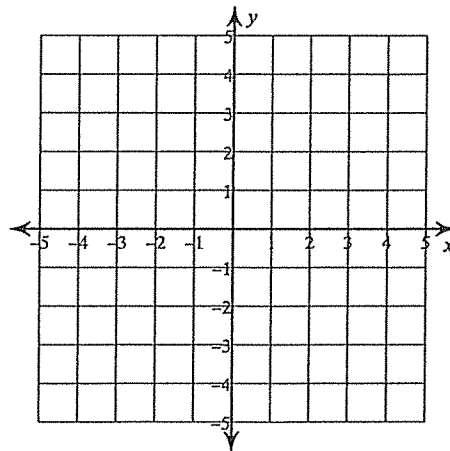15) $y > x + 3$

$\quad y \geq -x - 1$

16) $y < \dfrac{1}{3}x + 2$

$\quad y \geq 2x - 3$

17) $y < -2x + 3$

$\quad y \geq 2x - 1$

23) Alberto and Huong are selling cheesecakes for a school fundraiser. Customers can buy pecan cheesecakes and chocolate marble cheesecakes. Alberto sold 2 pecan cheesecakes and 1 chocolate marble cheesecake for a total of $19. Huong sold 11 pecan cheesecakes and 11 chocolate marble cheesecakes for a total of $165. What is the cost each of one pecan cheesecake and one chocolate marble cheesecake?

24) The senior classes at High School A and High School B planned separate trips to the local amusement park. The senior class at High School A rented and filled 10 vans and 14 buses with 714 students. High School B rented and filled 3 vans and 7 buses with 343 students. Each van and each bus carried the same number of students. How many students can a van carry? How many students can a bus carry?

25) Krystal and James each improved their yards by planting daylilies and shrubs. They bought their supplies from the same store. Krystal spent $125 on 11 daylilies and 6 shrubs. James spent $59 on 5 daylilies and 3 shrubs. Find the cost of one daylily and the cost of one shrub.