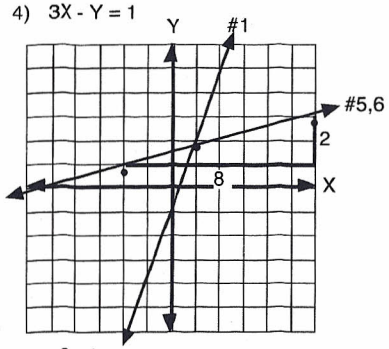
11A

1) on the graph

2) y-intercept = -1

3) Y = 3X - 1

4) 3X - Y = 1



5) $\frac{3-1}{6-(-2)} = \frac{2}{8} = \frac{1}{4}$ (see graph)

6) Y = 1/4 X + b
(3) = 1/4(6) + b
3 = 3/2 + b, b = 1 1/2 (see graph)

7) Y = 1/4 X + 1 1/2

8) Y - 1/4 X = 3/2, X - 4Y = -6

9) (2) = 5(1) + b
2 - 5 = b, b = -3
Y = 5X - 3

10) (6) = 6(-3) + b
6 = -18 + b, b = 24
Y = 6X + 24

11) (1) = -4(1) + b
1 = -4 + b, b = 5
Y = -4X + 5

12) (2) = 1/2(2) + b
2 = 1+ b, b = 1
Y = 1/2 X + 1

13) 8 = 2/3(5) + b
8 - 10/3 = b, b = 4 2/3
Y = 2/3 X + 4 2/3

14) (1) = -1/4(2) + b
1 + 1/2 = b, b = 1 1/2
Y = -1/4 X + 1 1/2

15) $\frac{5-3}{4-2} = \frac{2}{2} = 1 = m$ (3) = 1(2) + b
1 = b, Y = X + 1

16) $\frac{1-6}{2-4} = \frac{-5}{-2} = 5/2 = m$ (1) = 5/2(2) + b
-4 = b, Y = 5/2 X - 4

17) $\frac{0-3}{1-3} = \frac{-3}{-2} = 3/2 = m$ (0) = 3/2(1) + b
-3/2 = b, Y = 3/2 X - 3/2

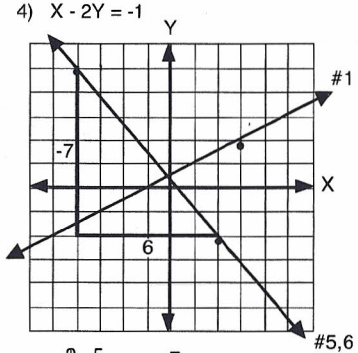
11B

1) on the graph

2) 2 = 1/2(3) + b, b = 1/2

3) Y = 1/2 X + 1/2

4) X - 2Y = -1



5) $\frac{-2-5}{2-(-4)} = -\frac{7}{6}$ (see graph)

6) Y = -7/6 X + b
(-2) = -7/6(2) + b
-2 = -14/6 + b, b = 1/3 (see graph)

7) Y = -7/6 X + 1/3

8) Y + 7/6 X = 1/3, 7X + 6Y = 2

9) (2) = 8(1) + b
2 = 8 + b, b = -6
Y = 8X - 6

10) (2) = 3(1) + b
2 - 3 = b, b = -1
Y = 3X - 1

11) (0) = -2(3) + b
0 = -6 + b, b = 6
Y = -2X + 6

12) $\frac{3-5}{-2-2} = \frac{-2}{-4} = \frac{1}{2}$ (3) = 1/2(-2) + b
4 = b, Y = 1/2 X + 4

13) $\frac{1-2}{1-5} = \frac{-1}{-4} = \frac{1}{4}$ (1) = 1/4(1) + b
3/4 = b, Y = 1/4 X + 3/4

14) $\frac{1-(-3)}{-3-(-2)} = \frac{4}{-1} = -4$ (1) = -4(-3) + b
-11 = b, Y = -4 X - 11

15) $\frac{-1-(-6)}{-2-(-5)} = \frac{5}{3}$ (-1) = 5/3(-2) + b
7/3 = b, Y = 5/3 X + 7/3

16) $\frac{6-(-3)}{-1-5} = \frac{9}{-6} = -3/2$ (6) = -3/2(-1) + b
9/2 = b, Y = -3/2X + 9/2

17) $\frac{8-2}{-3-7} = \frac{6}{-10} = -3/5$ (2) = -3/5(7) + b
6 1/5 = b,
Y = -3/5X + 6 1/5

11C

1) on the graph

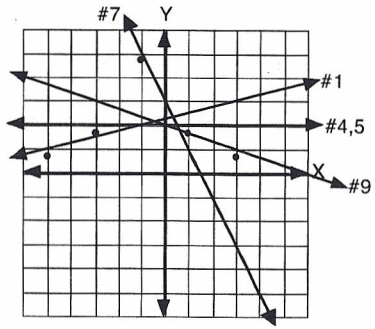
2) (1) = 1/4(-5) + b
1 = -5/4 + b, b = 2 1/4

3) Y = 1/4 X + 2 1/4, X - 4Y = -9

4) $\frac{2-2}{-3-1} = \frac{0}{-4} = 0$ (see graph)

5) (see graph) (2) = 0(1) + b, b = 2

6) Y = 2; Y=2



7) on the graph (slope must be -2)

8) (5) = -2(-1) + b, b = 3
Y = -2X + 3, 2X + Y = 3

9) on the graph (slope must be -1/3)

10) (1) = -1/3(3) + b, b = 2
Y = -1/3 X + 2, X + 3Y = 6

11) distributive

12) commutative

13) commutative

14) associative

15) $\sqrt{9} = 3$

16) 45% = .45, .45 x 98 = 44.10

17) $\frac{5 \text{ boys}}{1 \text{ girl}} = \frac{5}{1}$

18) $\frac{5 \text{ boys}}{6 \text{ total}} = \frac{5}{6}$

19) $\frac{5}{6} = 5 \div 6 = .83 = 83\%$

20) $\frac{5}{\cancel{6}} \times \frac{8}{\cancel{48}} = 40$ boys

11D

1) on the graph

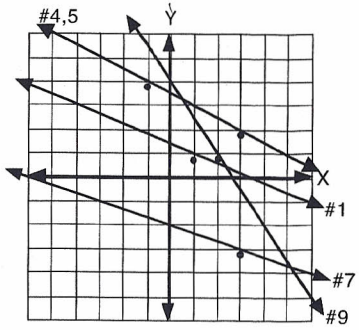
2) (1) = -2/5(1) + b
1 = -2/5 + b, b = 1 2/5

3) Y = - 2/5 X + 1 2/5, 2X + 5Y = 7

4) $\frac{2-4}{3-(-1)} = \frac{-2}{4} = -\frac{1}{2}$ (see graph)

5) (see graph) (2) = -1/2(3) + b, b = 3 1/2

6) Y = -1/2 X + 3 1/2, X + 2Y = 7



7) on the graph (slope must be -1/3)

8) (-3) = -1/3(3) + b, b = -2
Y = -1/3 X - 2, X + 3Y = -6

9) on the graph (slope must be -3/2)

10) (1) = -3/2(2) + b, b = 4
Y = -3/2 X + 4, 3X + 2Y = 8

11) true

12) false

13) false

14) true

15) $\sqrt{49} = 7$

16) 16% = .16, .16 x 32 = 5.12

17) $\frac{5 \text{ Steeler}}{8 \text{ total}} = \frac{5}{8}$ 5 ÷ 8 = .625 = 62.5%

18) $\frac{3 \text{ Eagle}}{8 \text{ total}} = \frac{3}{8}$ 3 ÷ 8 = .375 = 37.5%

19) .375 x 640 = 240 Eagle fans
.625 x 640 = 400 Steeler fans
(may also be computed with fractions)

20) Y = 20(15) + 100, Y = $400

11E

1) on the graph

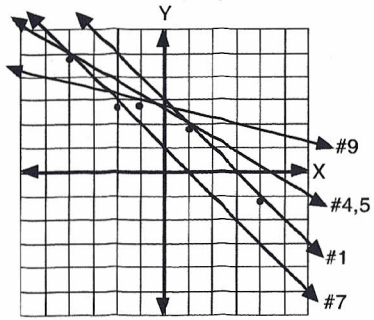
2) $(-1) = -1(4) + b$
$b = 3$

3) $Y = -X + 3$, $X + Y = 3$

4) $\frac{5 - 2}{-4 - 1} = \frac{3}{-5} = -\frac{3}{5}$ (see graph)

5) (see graph) $(2) = -3/5(1) + b$, $b = 2\ 3/5$

6) $Y = -3/5\ X + 2\ 3/5$, $3X + 5Y = 13$



7) on the graph (slope must be -1)

8) $(3) = -1(-2) + b$, $b = 1$
$Y = -X + 1$, $X + Y = 1$

9) on the graph (slope must be -1/4)

10) $(3) = -1/4(-1) + b$, $b = 2\ 3/4$
$Y = -1/4\ X + 2\ 3/4$, $X + 4Y = 11$

11) $(-1)(2)(-3)(4)(-5)^2 = -\{-[-(-X)]\}$
$(-2)(-12)(25) = X$, $(24)(25) = X$, $X = 600$

12) $(72A - 84A = 36AF) \div 12A$
$6 - 7 = 3F$, $F = -1/3$

13) $10(-4.2Q) - 10(1.8Q) = 10(-6)$
$-42Q - 18Q = -60$, $Q = 1$

14) $1000(.14) - 1000(.023) = 1000(.07C)$
$140 - 23 = 70C$, $1\ 47/70 = C$

15) $\frac{2}{5}$ $2 \div 5 = .4 = 40\%$

16) $\frac{3}{5}$ $3 \div 5 = .6 = 60\%$

17) $.4 \times 500 = 200$ g

18) $500 - 200 = 300$ g

19) $5{,}280 \times 4.5 = 23{,}760$ ft.

20) 1 yd. = 3 ft. $5{,}280 \div 3 = 1{,}760$ yds.

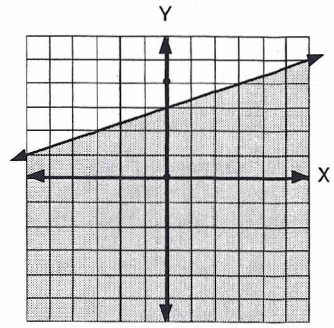
12A

1) $Y = 1/3\ X + 3$ see graph

2) solid

3) (0, 0) $3(0) \le (0) + 9$, $0 \le 9$ true
(0, 4) $3(4) \le (0) + 9$, $12 \le 9$ false
(You may choose any points you wish as long as they are on opposite sides of the line)

4) see graph

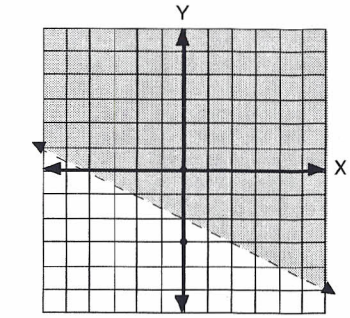


5) $Y = -1/2\ X - 2$ see graph

6) dotted

7) (0, 0) $2(0) > -(0) - 4$, $0 > -4$ true
(0, -3) $2(-3) > -(0) - 4$, $-6 > -4$ false

8) see graph

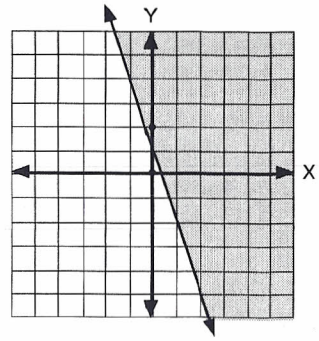


9) $Y = -3X + 1$ see graph

10) solid

11) (0, 0) $3(0) + (0) \ge 1$, $0 \ge 1$ false
(0, 2) $3(0) + (2) \ge 1$, $2 \ge 1$ true

12) see graph



13) $Y > -X - 2$

14) $-2Y < -4X + 6$
$Y > 2X - 3$

15) $-4Y \ge 8X + 8$
$Y \le -2X - 2$