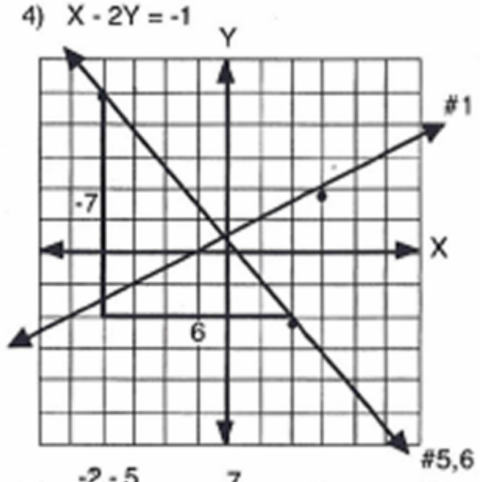
11B

1) on the graph

2) $2 = 1/2(3) + b, \quad b = 1/2$

3) $Y = 1/2\,X + 1/2$

4) $X - 2Y = -1$



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

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

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

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

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

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

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

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

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

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

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

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

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

3/2

11C

1) on the graph

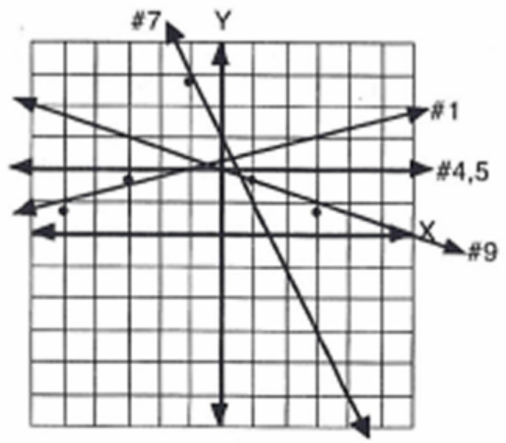
2) $(1) = 1/4(-5) + b$
$1 = -5/4 + b, \quad b = 2\ 1/4$

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

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

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

6) $Y = 2; \quad Y=2$



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

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

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

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

11) distributive

12) commutative

13) commutative

14) associative

15) $\sqrt{9} = 3$

16) $45\% = .45, \quad .45 \times 98 = 44.10$

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

11D

1) on the graph

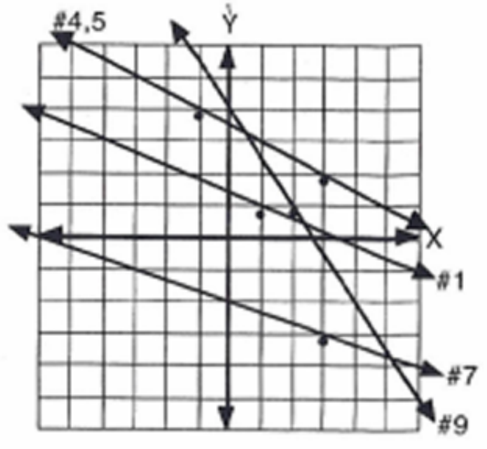
2) $(1) = -2/5(1) + b$
$1 = -2/5 + b, \quad b = 1\ 2/5$

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

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

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

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



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

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

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

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

11) true

12) false

13) false

14) true

15) $\sqrt{49} = 7$

16) $16\% = .16, \quad .16 \times 32 = 5.12$

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

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

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

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