

GEOMETRY CLASS NOTES

Weeks:

9-26-12

$$\textcircled{1} \quad -33 = 24y + 15x$$

$$25 + 7x + 8y = 0$$

$$-33 = 24y + 15x \rightarrow -33 = 24y + 15x$$

$$25 = -8y - 7x \xrightarrow{(3)} 75 = -24y - 21x$$

Find x

$$\begin{array}{r} 42 = -6x \\ -6 \quad -6 \end{array}$$

$$\textcircled{-7 = x}$$

$$25 + 7(-7) + 8y = 0$$

$$25 - 49 + 8y = 0$$

$$-24 + 8y = 0$$

$$\frac{8y}{8} = \frac{24}{8}$$

$$\textcircled{y = 3}$$

$$\boxed{(-7, 3)} \checkmark$$

$$\textcircled{3} \quad 0 = 7 + 3x(-y) \Rightarrow y = 7 + 3x$$

$$-3x + 9 + 9y = 0$$

$$-3x + 9 + 9[7 + 3x] = 0$$

$$\underline{-3x} + 9 + 63 + \underline{27x} = 0$$

$$24x + 9 + 63 = 0$$

$$24x + \frac{72}{-72} = 0$$

$$\frac{24x}{24} = \frac{-72}{24}$$

$$\boxed{x = -3}$$

Find y

$$0 = 7 + 3(-3) - y$$

$$\begin{array}{ccc} 0 & = & 7 + -9 - y \\ +y & & +y \end{array}$$

$$\boxed{y = -2}$$

$$\boxed{(-3, -2)}$$

By: Ryan Brown

Roll Tide! War Eagle!

$$\textcircled{11} \quad \begin{aligned} -2y &= -14 + 4x \\ -4y &= -7x + 2 \end{aligned}$$

$$\begin{array}{rcl} -2y & = & -14 + 4x \xrightarrow{(-2)} 4y = 28 - 8x \\ -4y & = & -2 - 7x \xrightarrow{(-2)} 4y = 2 - 7x \\ \hline & & 0 = 26 - 15x \\ & & 15x = 26 \\ & & x = \frac{26}{15} \end{array}$$

$$\textcircled{x = +2}$$

$$-2y = -14 + 4(2)$$

$$-2y = -14 + 8$$

$$\frac{-2y}{-2} = \frac{-6}{-2}$$

$$\textcircled{x = 3}$$

$$\boxed{(2, 3)}$$

By: Luke Owens

$$(20) \quad -81 = 27x - 15y$$

$$y = -\frac{1}{2}x - \frac{3}{2}$$

$$-81 = 27x - 15 \left(-\frac{1}{2}x - \frac{3}{2} \right)$$

$$7. \quad -81 = 27x + \frac{15}{2}x + \frac{45}{2} \quad .2$$

$$-162 = 54x + 15x + 45,$$

$$-162 = 69x + 45,$$

$$\underline{-45}$$

$$\underline{-45}$$

$$\underline{-207} = \underline{69x}$$

$$69$$

$$69$$

$$\underline{-3 = x}$$

$$-81 = 27(-3) - 15y$$

$$-81 = -81 - 15y$$

$$\underline{+81} \quad \underline{+81}$$

$$\underline{0} = \underline{-15y}$$

$$\underline{-15} \quad \underline{-15}$$

$$\underline{y = 0}$$

$$\boxed{(-3, 0)}$$

By: *Jay Williams*

Geometry

Per 5

$$\textcircled{1} \quad 10x + 4y = 90^\circ$$

$$\textcircled{+} \quad 26x - 4y = 90$$

$$\frac{36x}{36} = \frac{180}{36}$$

$$x = 5$$

$$(5, 10)$$

$$10(5) + 4y = 90$$

$$4y = 40 \therefore y = 10$$

$$\textcircled{2} \quad 3x + 3y = 135$$

$$\textcircled{+} \quad 3x + 17y = 45$$

$$20y = 180$$

$$y = \frac{180}{20}$$

$$y = 9$$

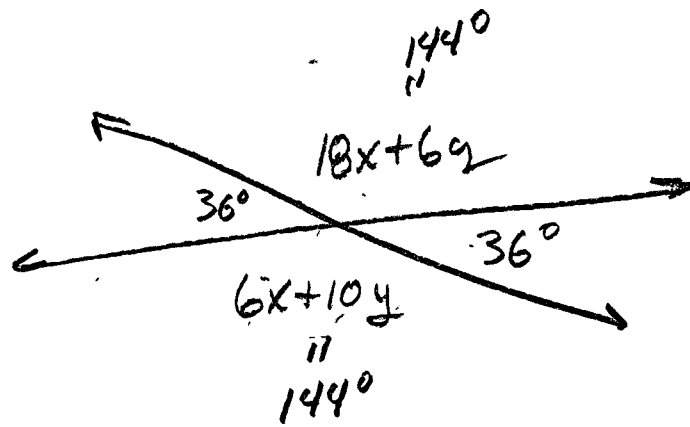
$$3x + 3(9) = 135$$
$$3x = 108$$

$$x = 36$$

$$(36, 9)$$

Per 5

(3.)



$$\begin{array}{r} 3121 \\ \times 432 \\ \hline -144 \\ \hline 208 \end{array}$$

$$\begin{array}{rcl} 18x + 6y & = & 144 \rightarrow 18x + 6y = 144 \\ 6x + 10y & = & 144 \xrightarrow{(-3)} -18x - 30y = -432 \\ \hline \end{array}$$

$$\begin{array}{rcl} -24y & = & -288 \\ \hline -24 & & -24 \end{array}$$

$$\begin{array}{rcl} 18x + 6(12) & = & 144 \\ -72 & & -72 \end{array}$$

$$y = 12$$

$$18x = 72$$

$$x = 4$$

$$(4, 12)$$

EBS

Per 5

③

$$18x + 6y = 144$$

$$6x + 10y = 144$$

$$\frac{10y}{10} = \frac{144 - 6x}{10}$$

$$y = \frac{72}{5} - \frac{3}{5}x$$

$$18x + 6 \left[\frac{72}{5} - \frac{3}{5}x \right] = 144$$

$$18x + \frac{432}{5} - \frac{18}{5}x = 144$$

$$\frac{90}{5}x - \frac{18}{5}x + \frac{432}{5} = 144$$

$$\frac{72}{5}x = \frac{720}{5} - \frac{432}{5}$$

$$\frac{5}{72} \cdot \frac{72}{5}x = \frac{\overset{144}{288}}{5} \cdot \frac{5}{72}$$

$$x = 4$$

$$y = 12$$

$$(4, 12)$$

$a = \$$ of adult ticket
 $c = \$$ of child ticket

Per 5

$$\begin{array}{rcl} 9a + 3c = 54 & \xrightarrow{(-2)} & -18a - 6c = -108 \\ 2a + 6c = 28 & \xrightarrow{(+)} & 2a + 6c = 28 \end{array}$$



$$\begin{array}{rcl} -18a & & -108 \\ -2a & & -28 \\ \hline -16a & = & -80 \\ -16 & & -16 \end{array}$$

$$\boxed{a = \$5} \text{ COST OF ADULT TICKET}$$

$$\begin{array}{rcl} 2(5) + 6c = 28 \\ -10 & & -10 \\ \hline 6c = 18 \end{array}$$

$$6c = 18$$

$\therefore$

$$\boxed{c = \$3} \text{ COST OF CHILD TICKET}$$

$V = \#$ STUDENTS ON VANS

Per 6

$B = \#$ STUDENTS ON BUS

$$5V + 5B = 170 \xrightarrow{(-2)} -10V - 10B = -340$$

$$11V + 10B = 346 \rightarrow 11V + 10B = 346$$

$$V = 6$$

STUDENTS
per VAN.

$$5(6) + 5B = 170$$

$$\begin{array}{r} 30 + 5B = 170 \\ -30 \quad -30 \end{array}$$

$$\frac{5B}{5} = \frac{140}{5}$$

$$B = 28$$

STUDENTS
per BUS

$N = \text{Senior tickets cost (\$)}$

Per 2

$t = \text{student tickets cost (\$)}$

$$1N + 8t = 96 \Rightarrow N = 96 - 8t$$

$$7N + 2t = 78$$

$$7[96 - 8t] + 2t = 78$$

$$\begin{array}{r} 5612 \\ 872 \\ -78 \\ \hline 594 \end{array}$$

$$\begin{array}{r} 672 \\ -672 \\ \hline -54t \end{array} \quad \begin{array}{r} -56t + 2t = 78 \\ -672 \\ \hline -594 \end{array}$$

$$t = \frac{-594}{-54}$$

$$t = 11 \quad \text{student tickets}$$

$$N + 8(11) = 96$$

$$N = 8 \quad \text{senior tickets}$$