1. Change each equation into Slope-Intercept Form.

a) $y - 9 = -\frac{5}{6}(x - 24)$

b) $24x - 18y = 90$

2. Miguel bought some basketballs and soccer balls for the gym class. Basketballs cost $24 each and soccer balls cost $30 each. He spent a total of $360.

a) Model this situation with an equation. Define your variables.

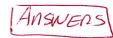EQ: Variables:

b) If he bought zero soccer balls find the number of basketballs purchased.

3. Write the equation of the line that passes through the points $(1,-2)\,\&\,(4,-2)$. Give your answer in any form you wish.

4. A line passes through the points $(5,9)\,\&\,(5,-1)$. Why can't you write the equation of this line in Slope-Intercept Form?

1. Change each equation into Slope-Intercept Form.

a) $y - 9 = -\frac{5}{6}(x - 24)$

$$y - 9 = -\frac{5}{6}x + 20$$
$$+9 \qquad +9$$

$$\boxed{y = -\frac{5}{6}x + 29}$$

b) $24x - 18y = 90$
$$-24x \qquad -24x$$

$$\frac{-18y}{-18} = \frac{90 - 24x}{-18}$$

$$\boxed{y = -5 + \frac{4}{3}x}$$

2. Miguel bought some basketballs and soccer balls for the gym class. Basketballs cost $24 each and soccer balls cost $30 each. He spent a total of $360.

a) Model this situation with an equation. Define your variables.

EQ: $24B + 30S = 360$

Variables:
$B = \#$ basketballs
$S = \#$ soccer balls

b) If he bought zero soccer balls find the number of basketballs purchased.

$$S = 0$$
$$24B + 30(0) = 360$$
$$24B = 360$$
$$\frac{24B}{24} = \frac{360}{24}$$

$$\boxed{B = 15 \text{ basketballs}}$$

3. Write the equation of the line that passes through the points $(1, -2)$ & $(4, -2)$. Give your answer in any form you wish.

$$m = \frac{-2 - {}^{-}2}{4 - 1} = \frac{0}{3} = 0$$

$$y + 2 = 0(x - 1)$$
$$y + 2 = 0 \quad \longrightarrow \quad \boxed{y = -2}$$

4. A line passes through the points $(5, 9)$ & $(5, -1)$. Why can't you write the equation of this line in Slope-Intercept Form?

$$m = \frac{9 - {}^{-}1}{5 - 5} = \frac{10}{0} = \text{undefined}$$

you can't replace m with the <u>word</u> undefined in any equation