<u>Finding the equation of a line given the slope and the y-intercept.</u>

A line has a slope of ¼ and a y-intercept of 2. find the equation in:

1) Functional form:

$$y = \frac{1}{4}x + 2$$

2) General form:

$$4(y) = 4\left(\frac{1}{4}\right)x + 2(4)$$
$$4y = x + 8$$
$$0 = x - 4y + 8 \Rightarrow x - 4y + 8 = 0$$

3) Symmetric form:

Method 1: Find intercepts

$$y \text{ int} = 2$$
$$y = 0, x = ?$$

$$x - 4(0) + 8 = 0$$
$$x = -8$$

$$\frac{x}{-8} + \frac{y}{2} = 1$$

OR

Method 2: Change from GF.

$$x - 4y + 8 = 0$$
$$\frac{x - 4y}{-8 \; - 8} = \frac{-8}{-8}$$
$$\frac{x}{-8} + \frac{y}{2} = 1$$

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