

2.5.16

$$\frac{2x}{5} + \frac{8y}{5} = 12$$

4)

$$(ax + by = 12)5$$

$$2x + 8y = 60$$

$$\frac{2x}{5} + \frac{8y}{5} = \frac{60}{5}$$

In the system of equations above, a and b are constants. If the system has infinitely many solutions, what is the value of $\frac{a}{b}$?

$$a = \frac{2}{5} \quad b = \frac{8}{5}$$

$$\frac{\frac{2}{5}}{\frac{8}{5}}$$

$$\frac{2}{\cancel{5}} \cdot \frac{\cancel{5}^1}{8} = \frac{2}{8} = \boxed{\frac{1}{4}}$$