

$$3x + 2 = 3$$

$$\frac{3x}{3} = \frac{1}{3}$$

$$3x + 2 = 3$$

$$3x = 1$$

$$x = \frac{1}{3}$$

If you write it correctly when it's easy, you give yourself a shot when it's not easy.

Language married to equations is Key.

12 hrs per week.

Any less & you're wasting money.

107, 109, 111 I read somebody's # 9 wrong.

Incomplete work!?

You have a week for a handful of questions. Nail 'em or ASK about

For the next 10 minutes, find what you got wrong & fix it!

$x = \text{words}$

Tell me, **PRECISELY**, what x represents and give its units.

#12 Let $x =$ the number of packages needed.
Here's the writeup:

$$\left(\begin{array}{c} x \text{ packages} \\ \text{ft}^2 \end{array} \right) \left(\begin{array}{c} 50 \text{ tiles} \\ \text{package} \end{array} \right) \left(\begin{array}{c} 1 \text{ ft}^2 \\ 1 \text{ tile} \end{array} \right) = \begin{array}{c} (12 \text{ ft})(18 \text{ ft}) \\ \text{ft}^2 \end{array}$$

$$50x = 216$$

$$= 216(\text{ft})(\text{ft})$$

$$= 216 \text{ ft}^2$$

$$x = \frac{216}{50} \approx 4.32 \text{ packages.}$$

Need to buy 5 packages

$$4.32 \text{ packs} = 4 \text{ packs} + (.32 \text{ packs}) \left(\begin{array}{c} 50 \text{ tiles} \\ 1 \text{ pack} \end{array} \right)$$

$$= 4 \text{ packs} + \frac{16 \text{ tiles.}}{1}$$

↳ cute.
clever.
Kudos.

Polya Problem-Solving Tax & Discount Questions.

① Understand. Part I didn't go over much.

#4 on quiz:

Propose a solution!

Tax rate is 5%

Price after tax is \$8

Want price before tax = x (in \$)

Guess \$7.80

check it:

$$7.80 + (.05)(7.80) = 8.19 \text{ (a bit high)}$$

Want

$$x + .05x = 8$$

Kinda lays out the problem for you.

$$1.05x = 8$$

$$x = \frac{8}{1.05} \approx \$7.62$$

Reason from one truth to the next. Others need to follow your reasoning.

$$\frac{3}{8} + \frac{6}{3} = \frac{5}{12} \quad \text{LCD} = 2 \cdot 2 \cdot 2 \cdot 3$$

$$\frac{3}{2 \cdot 2 \cdot 2} \cdot \frac{3}{3} + \frac{6}{3} \cdot \frac{2 \cdot 2 \cdot 2}{2 \cdot 2 \cdot 2} = \frac{5}{2 \cdot 2 \cdot 3} \cdot \frac{2}{2}$$

Meet me halfway.

$$\frac{3}{x^2-3x+2} + \frac{1}{x-1} = \frac{5}{x^2-x-2} \quad \text{LCD} = (x-2)(x-1)(x+1)$$

$$\frac{3}{(x-2)(x-1)} + \frac{1}{x-1} = \frac{5}{(x-2)(x+1)}$$

$$\left(\frac{3}{(x-2)(x-1)} \right) \frac{(x+1)}{(x+1)} + \left(\frac{1}{x-1} \right) \left(\frac{(x-2)(x+1)}{(x-2)(x+1)} \right) = \frac{5}{(x-2)(x+1)} \left(\frac{x-1}{x-1} \right)$$

$$\frac{3(x+1) + 1(x-2)(x+1)}{\text{LCD}} = \frac{5(x-1)}{\text{LCD}} \implies$$

$$3(x+1) + (x-2)(x+1) = 5(x-1)$$

$$\left\{ x \mid x < \frac{6}{5} \text{ and } x > -\frac{2}{5} \right\}$$

