

Ex. Score: 0 of 1 pt

1.2.13

Solve the formula for the F_1 .

$$\frac{1}{F} = \frac{1}{F_1} + \frac{1}{F_2} + \frac{1}{F_3}$$

$$LCD = F F_1 F_2 F_3$$

I don't prefer clearing fractions, because (SPOILER)
I know what comes after

$$\left(\frac{1}{F} = \frac{1}{F_1} + \frac{1}{F_2} + \frac{1}{F_3} \right) (F F_1 F_2 F_3)$$

$$\frac{1}{F} \cdot \cancel{F} F_1 F_2 F_3 = \frac{1}{F_1} \cdot \cancel{F} \cancel{F_2} F_3 + \frac{1}{F_2} \cdot \cancel{F} F_1 \cancel{F_3} + \frac{1}{F_3} \cdot \cancel{F} F_1 F_2 \cancel{F_3}$$

$$F_1 F_2 F_3 = F F_2 F_3 + F F_1 F_3 + F F_1 F_2$$

$$\underline{-F F_1 F_3 - F F_1 F_2} = \underline{-F F_1 F_3 - F F_1 F_2}$$

$$F_1 F_2 F_3 - F F_1 F_3 - F F_1 F_2 = F F_2 F_3$$

$$F_1 \left(\frac{F_2 F_3}{F_1} - \frac{F F_1 F_3}{F_1} - \frac{F F_1 F_2}{F_1} \right) = F F_2 F_3$$

$$F_1 (F_2 F_3 - F F_3 - F F_2) = F F_2 F_3$$

$$F_1 \cdot \boxed{} = F F_2 F_3$$

$$\boxed{} = F_2 F_3 - F F_3 - F F_2$$

$$\frac{F_1 \cdot \boxed{}}{\boxed{}} = \frac{F F_2 F_3}{\boxed{}} = F_1$$

$$F_1 = \frac{F F_2 F_3}{F_2 F_3 - F F_3 - F F_2}$$

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Ex. Score: 0 of 1 pt HW Score: 0% (0 of 17 pts)

1.2.27 What is the simple interest rate if \$90.75 in interest is earned on a deposit of \$1752.29 in one year?

The simple interest rate is %.
(Round to the nearest tenth of a percent.)

Simple Interest:
 $I = Prt$ $t = 1$

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Ex. Score: 0 of 1 pt HW Score: 0

1.2.33 Cameron and his friend John bought a used circus carousel for \$42,095, including sales tax. If the sales tax rate is 6%, then what was the cost of the carousel before the tax?

1.2.47

Ex. Score: 0 of 1 pt HW Score: 0% (0 of 17 pts)

Bobby and Rick are in a 10-lap race on a one-mile oval track. Bobby, averaging 90 mph, has completed two laps just as Rick is getting his car onto the track. What speed does Rick have to average to be even with Bobby at the end of the tenth lap?

To be even with Bobby at the end of the tenth lap, Rick has to average a speed of mph.
(Type an integer or a decimal.)

one-mile track

Bobby's speed is $90 \frac{\text{mi}}{\text{hr}}$

Bobby's done 2 laps.

Want to know Rick's average speed, assuming he finishes in a tie after 10 laps.

Let $r =$ Rick's average speed (in $\frac{\text{mi}}{\text{hr}}$)

	D	R	t
Bobby	8	90	t
Ricky	10	r	t

$$t = t$$

$$\left(\frac{8}{90} = \frac{10}{r} \right) 90r$$

Cross multiply:

$$8r = 900$$

$$r = \frac{900}{8}$$

$$= 112.5 \frac{\text{mi}}{\text{hr}} = r$$

$$D = r t \rightarrow$$

$$t = \frac{D}{r}$$

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 Ex. Score: 0 1.2.49 HW Score: 0% (0 of 17 pts)

Fritz normally commutes at an average speed of 48 miles per hour, but this morning's heavy traffic held him to only 40 miles per hour. He must determine whether he can drive home fast enough this evening in order to maintain his usual round-trip average speed.

In order to maintain his usual average round-trip speed, Fritz will have to drive home at miles per hour.

	D	r	t	
To Work	D	40	$\frac{D}{40}$	$D = rt$ $t = \frac{D}{r}$
BACK HOME	D	r	$\frac{D}{r}$	
Round trip	2D	48	$\frac{2D}{48}$	

Ex. Score: 0 of 1 pt HW Score: 0%

1.2.7.3

The owner of a health-food store sells dried apples for \$1.30 per quarter-pound, and dried apricots for \$1.50 per quarter-pound. How many pounds of each must he mix together to get 40 lb of a mixture that sells for \$1.45 per quarter-pound?

He must mix lb of apples and lb of apricots. Apples

(Type integers or fractions.)

$$\frac{1.50 \$}{\frac{1}{4} \text{ lb}} = (1.50) \left(\frac{4}{1}\right) \frac{\$}{\text{lb}} = 6 \frac{\$}{\text{lb}}$$

$$\frac{1.30 \$}{\frac{1}{4} \text{ lb}} = 1.30 \cdot 4 \frac{\$}{\text{lb}} = 5.20 \frac{\$}{\text{lb}}$$

$$1.45 \cdot 4 \frac{\$}{\text{lb}} = 5.80 \frac{\$}{\text{lb}}$$

Let x = the amount of apples (in lbs)
 OR x = the # of lbs of apples,
 y = apricots

Want 40 lbs worth $\frac{\$5.80}{\text{lb}}$ $\begin{matrix} 5.80 \\ 40 \\ \hline 232.00 \end{matrix}$

TOTAL WEIGHT $x + y = 40 \Rightarrow y = 40 - x$

$\$$ $6 \frac{\$}{\text{lb}} x \text{ lb} + 5.20 \frac{\$}{\text{lb}} y \text{ lb} = \frac{\$5.80}{\text{lb}} \cdot 40$

$\$ = \$$

$$6x + 5.2y = 232$$

$$6x + 5.2(40 - x) = 232$$

$$6x + (5.2)(40) - 5.2x = 232$$

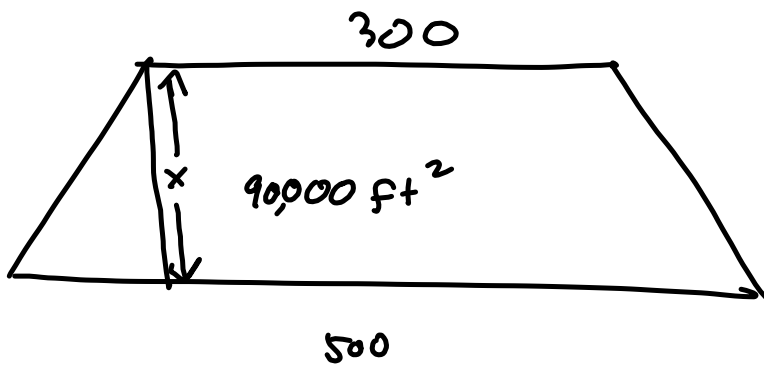
$$-(5.2)(40) = -(5.2)(40) + 232$$

$$.8x = -5.2(40) + 232$$

$$x = \frac{-5.2(40) + 232}{.8}$$

$$x = 30 \text{ lbs} \rightarrow$$

$$y = 10 \text{ lbs}$$



$$A = \frac{1}{2}(b_1 + b_2)x$$

Let x = the distance between the streets (\approx ft)

Then $\frac{1}{2}(300 + 500)x = 90,000$

$$\frac{1}{2}(\underbrace{300 \text{ ft} + 500 \text{ ft}}_{\text{ft}}) \cdot \underbrace{x \text{ ft}}_{\text{ft}} = 90000 \text{ ft}^2$$

$$400x = 90000$$

$$x = \frac{90000}{400} = \frac{900}{4} = 225 \text{ ft} = x$$