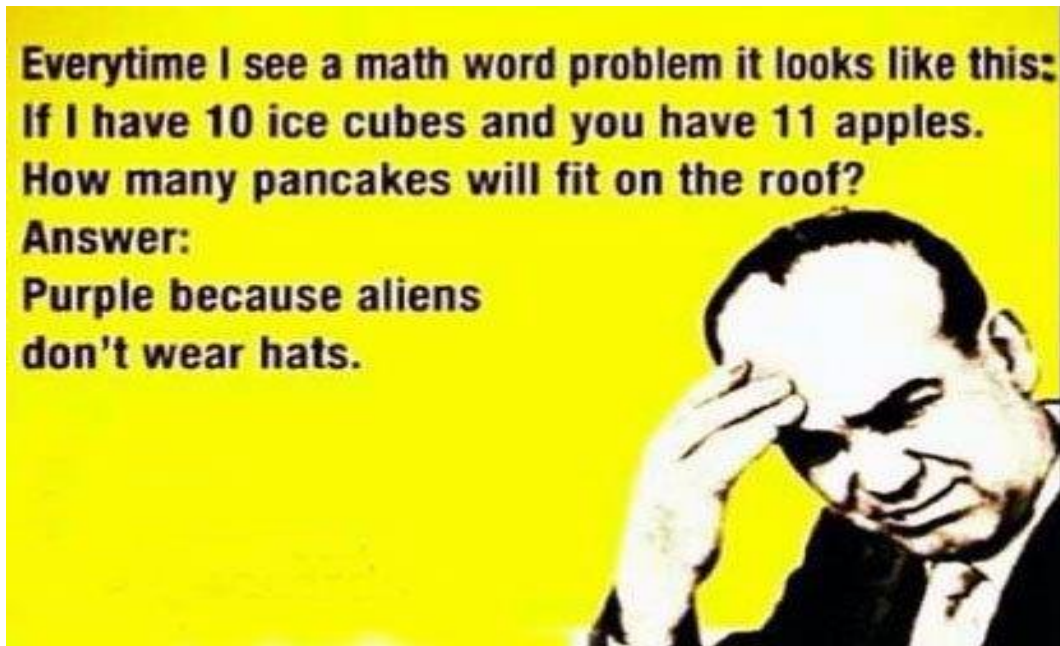


Word Problems



Alexis can ride her bicycle twice as fast as Bobby-Raye.
Bobby-Raye takes 1 hour longer than Alexis to ride a distance of 24km.

How fast are Alexis and Bobby-Raye riding their bikes?

	d	v	t
Alexis	24	$2v$	$\frac{24}{2v}$
Bobby-Raye	24	v	$\frac{24}{v}$

$$\text{Alexis' } t = \text{Bobby-Raye's } t - 1$$

$$\frac{24}{2V} = \frac{24}{V} \cdot 1$$

$$\frac{12}{V} = \frac{24 - V}{V}$$

$$12 = 24 - V$$

$$12 - 24 = -V$$

$$-12 = -V$$

$$12 = V$$

Dividing 20 by a number gives the same result as dividing 12 by 2 less than the number.

Find the number.

$$\frac{20}{x} = \frac{12}{x-2}$$

$$(x-2)(20) = 12x$$

$$20x - 40 = 12x$$

$$20x - 12x = 40$$

$$8x = 40$$

$$x = \frac{40}{8}$$

$$x = 5$$

Dividing 108 by one more than a number gives the same result as dividing 72 by three less than the number.

What is the number?

$$(x-3)108 = 72(x+1)$$

$$\underline{108x} - \underline{324} = \underline{72x} + \underline{72}$$

$$108x - 72x = 72 + 324$$

$$36x = 396$$

$$x = \frac{396}{36}$$

$$x = 11$$

Gaven drove 404 km from Edmonton to Banff in the same length of time as Thomas took to drive 364 km from Edmonton to Jasper. Gaven drove 10km/hr faster than Thomas.

At what speed did Thomas drive?

$$d = vt$$

$$\frac{d}{v} = t$$

	v	d	t
Gaven	$v+10$	404	$\frac{404}{v+10}$
thomas	v	364	$\frac{364}{v}$

$$t_g = t_T$$

$$\frac{404}{v+10} = \frac{364}{v}$$

$$v(404) = 364(v+10)$$

$$404v = 364v + 3640$$

$$404v - 364v = 3640$$

$$40v = 3640$$

$$v = \frac{3640}{40}$$

$$v = 91 \text{ km/hr}$$

Two friends share a paper route. Cassidy can deliver the papers in 40mins. Willow can deliver the same route in 50min.

How long, to the nearest minute, does the paper route take if they work together?

	Time	$\frac{1}{\text{Time}}$	$\frac{t}{\text{Time}}$
Cassidy	40min	$\frac{1}{40}$	$\frac{t}{40}$
Willow	50m	$\frac{1}{50}$	$\frac{t}{50}$
Together	t		

$$\frac{t}{40} + \frac{t}{50} = 1$$

$$\frac{5t + 4t}{200} = \frac{200}{200}$$

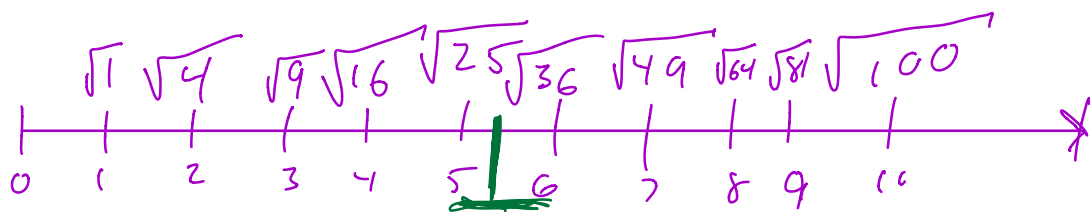
$$5t + 4t = 200$$

$$9t = 200$$

$$t = \frac{200}{9}$$

$$t \approx 22 \text{ min.}$$

$$\sqrt{69} \approx 8.3$$



$$\sqrt{28} \approx 5.3$$

$$\sqrt{55} \approx 7.4$$