

16.)

$$y = 20x$$

$$y = 20x + 10$$

Isabelle

1	2	3
<small>x=0</small>	<small>y=0</small>	
20	40	60

her sister

1	2	3
30	50	70

6.)  
yes

10	20	30	40
$\times \frac{20}{10}$	$\times \frac{30}{20}$	$\times \frac{30}{10}$	$\times \frac{30}{20}$
15	30	45	60

$$\frac{10}{15} = \frac{20}{30}$$

(18.)

$$\frac{0.25 \frac{1}{4} \text{ c flour}}{1 \text{ c water}} = \frac{6 \text{ c flour}}{24 \text{ c water}}$$

$$\frac{24 \cancel{\text{ c}}}{1} \times \frac{1 \text{ gal}}{16 \cancel{\text{ c}}} = \frac{24}{16} = 1\frac{1}{2} \text{ gallons}$$

22.

$$6.25\% = 0.0625$$
$$t = 0.0625p$$
$$t = 6.25\% p$$

$$p \cdot 6.25\% = t$$

6.25% tax  
 $p$  = price  
 $t$  = total tax

$$p + t = \text{new amount}$$

24.)    16       20       24       constant unit price  
         3.25    3.75    4.25

$$\frac{\$3.25}{16 \text{ oz}} = 0.2031$$

$$\frac{3.75}{20} = 0.1875$$

$$\frac{4.25}{24} = 0.1770$$

unit price  
(for 1)

No not constant

## 6-5 Solving Proportions

$$\frac{\text{flour}}{\text{salt}} = \frac{4}{2} = \frac{2}{1}$$

Ratio = proportional

$$\boxed{\frac{2}{1}} \quad \frac{4}{2} \times 2 = \frac{8}{4} \quad \frac{12}{6} \quad \frac{16}{8}$$

Handwritten annotations: Red lines connect 4 to 8 and 2 to 4. Green lines connect 8 to 12 and 4 to 6. Red numbers 16 and 48 are written above the 8 and 12 respectively. A red arrow points from 16 to 48.

Cross Products are equal

$$\begin{array}{ccc} \textcircled{990} & & \textcircled{990} \\ \swarrow & \square & \searrow \\ 5 & \text{---} & 66 \\ \hline 15 & & 90 \end{array}$$

1A

$$\begin{array}{ccc} \textcircled{1.4} & & \\ \swarrow & & \searrow \\ x & & 7 \\ \hline 4 & & 20 \end{array}$$

Compare quantities in the same order!

$$\frac{20 \text{ min}}{160 \text{ people}} = \frac{27.5 \text{ min}}{220 \text{ people}}$$

$$\frac{160 \text{ people}}{20 \text{ min}} = \frac{220 \text{ people}}{27.5 \text{ min}}$$

$$\frac{8 \text{ packages}}{240 \text{ items}} = \frac{n \text{ } \overline{16.6} \text{ packages}}{500 \text{ items}}$$
$$\approx 16 \text{ packages}$$

$$\frac{\$30}{4 \text{ students}} = \frac{\$150.00}{20 \text{ students}}$$

$$3A. \quad \frac{\$49.45}{5} = \frac{\$79.12}{8}$$

$$\frac{49.45}{5 \text{ DVD}} = \frac{\$9.89}{1 \text{ DVD}}$$

$$C = \text{cost}$$
$$C = \$9.89d$$

$$C = \$9.89(11)$$

$$C = \$108.79$$

for each  
slope  
common  
difference  
constant of  
variation

#10-20

$$\frac{8}{12} = \frac{28}{m}$$

10.) (42)