

Ratios

part to part

part : part

pizza
111

sundae
11

ratio
pizza : sundae
3 : 2

pancake
30

bacon/egg
cheese biscuit
70

30 : 70
10 10

3 : 7

pancake
biscuit

proportion

$\frac{3}{7} = \frac{150}{x}$
*50 (above 7)
*50 (below 7)
350

~~$\frac{3}{7} = \frac{150}{x}$~~

$3x = (7)(150)$

$\frac{3x}{3} = \frac{1050}{3}$

$x = 350$

part
whole

fraction
pizza $\frac{3}{5}$

sundae $\frac{2}{5}$

Exceptional
Jokes
2

Awful
Jokes
48

$$\begin{array}{l} \text{Exceptional} \\ \text{Awful} \end{array} \frac{2}{48} = \frac{15}{X}$$

$$\frac{2}{48} = \frac{15}{X}$$

$$2X = (48)(15)$$

$$\frac{2X}{2} = \frac{720}{2}$$

$$X = 360$$

Dr Pepper

6 pack \$4.80

20 pack \$15.40

Unit price

Cost per can

$$\frac{\text{cost}}{\text{can}} = \frac{\$4.80}{6} = \$0.80$$

\$0.80 per can

$$\frac{\text{cost}}{\text{can}} = \frac{\$15.40}{20} = \$0.77$$

\$0.77 per can

Coke

12 pack of 12 oz can
\$4.80

or 64 oz \$1.60

$$\frac{\$1.60}{64 \text{ oz}} = \frac{0.025}{\text{oz}}$$

$$\text{Unit price} \frac{\text{cost}}{\text{oz}} = \frac{\$4.80}{12 \cdot 12} = \frac{\$4.80}{144} = \frac{0.033}{\text{oz}}$$

$$\frac{2.5 \text{¢}}{\text{oz}}$$

Proportions

$$\frac{6}{X} = \frac{18}{42}$$

$$\frac{6}{X} = \frac{18}{42}$$

3 ÷

3 ÷

$$\frac{42}{3} = 14$$

$$6(42) = 18X$$

$$\frac{252}{18} = \frac{18X}{18}$$
$$14 = X$$

1.) $\frac{12}{21} = \frac{X}{14}$

$$12(14) = 21X$$

$$\frac{168}{21} = \frac{21X}{21}$$
$$8 = X$$

2.) $\frac{X}{9} = \frac{26}{6}$

$$6X = 9(26)$$

$$\frac{6X}{6} = \frac{234}{6}$$

$$X = 39$$

$$1.) \frac{63}{x} = \frac{14}{16}$$

$$(63)(16) = 14x$$

$$\frac{1008}{14} = \frac{14x}{14}$$

$$\boxed{72 = x}$$

$$2.) \frac{x+2}{8} = \frac{9}{24}$$

$$24(x+2) = (9)(8)$$

$$24x + 48 = 72$$
$$-48 \quad -48$$

$$\frac{24x}{24} = \frac{24}{24}$$

$$\boxed{x = 1}$$