

Ratio

part to part
part : part

Pizza
++++1

Sundae
IIII

ramen
14

females
6

$$\frac{14}{2} : \frac{6}{2} = 7 : 3$$

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

$$(7)(150) = 3x$$

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

$$\boxed{350 = x}$$

Fraction

$\frac{\text{part}}{\text{whole}}$

Ratio
pizza : sundae
6 : 4

fraction
pizza
 $\frac{6}{10} = \frac{3}{5}$

fraction
sundae
 $\frac{4}{10} = \frac{2}{5}$

ramen : females = $\frac{7}{3} = \frac{x}{150}$

**50*

proportion

**50*

$$\boxed{350}$$

Exceptional
Jokes

2

Awful
Jokes

248

$$\frac{\text{Exceptional}}{\text{Awful}} = \frac{2}{248} = \frac{15}{X}$$

$$2x = (15)(248)$$

$$\frac{2x}{2} = \frac{3720}{2}$$

$$x = 1860$$

Fiji

6 pack \$4.80

Unit Price

$$\frac{\text{Cost}}{\text{bottle}} = \frac{\$4.80}{6} = \$0.80$$

\$0.80 per bottle

20 pack \$15.40

$$\frac{\text{Cost}}{\text{bottle}} = \frac{\$15.40}{20} = \$0.77$$

\$0.77 per bottle

Fiji

12 pack of 12oz bottles ^{or} 3.34/oz

$$\text{Unit price } \frac{\text{cost}}{\text{oz}} = \frac{\$4.80}{12 \cdot 12\text{oz}} = \frac{\$4.80}{144\text{oz}} = \frac{0.0333...}{\text{oz}}$$

64oz \$1.60

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

2.5¢/oz

Proportions

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

$$6(42) = 18x$$

$$\frac{252}{18} = \frac{18x}{18}$$

$$\boxed{14 = x}$$

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

Diagram showing the cross-multiplication process with arrows and a circled 3, indicating a simplification step.

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

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

$$\underline{(12)(14)} = \underline{21x}$$

$$\frac{168}{21} = \frac{21x}{21}$$

$$\boxed{8 = x}$$

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

$$6x = (26)(9)$$

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

$$\boxed{x = 39}$$

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

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

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

$$72 = x$$

$$\frac{63}{x} = \frac{14}{16}$$

$$\frac{(63)(16)}{14} = x = 72$$

$$\frac{8}{6} = \frac{12}{x-3}$$

$$\left[\frac{8(x-3)}{8} = \frac{(6)(12)}{8} \right]$$

$$x-3 = \frac{(6)(12)}{8}$$

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

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

$$24x + 48 = 72$$

$$-48 \quad -48$$

$$24x = 24$$

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

$$x = 1$$

$$x-3 = \frac{72}{8}$$

$$x-3 = 9$$

$$+3 \quad +3$$

$$x = 12$$

