

$$I = p r t$$

I = interest

P = Principle (money you put in)

R = Rate (% of increase)

t = time (usually in years)

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① $I = P \cdot r \cdot t$

$$I = 350 \cdot 4\% \cdot 5$$

$$\frac{1}{2} = .5 = 50\%$$

$$I = 70$$

$$\begin{array}{r} 350 \\ .04 \\ \hline 14.00 \end{array}$$

$$\begin{array}{r} 14 \\ 5 \\ \hline 70 \end{array}$$

b)

$$I = P \cdot R \cdot T$$

$$35 = .035$$

$$a(bc) = (ab)c$$

$$I = 500 \cdot (.035) \cdot 5$$

$$\begin{array}{r} 500 \\ 5 \\ \hline 2500 \end{array}$$

$$\begin{array}{r} 2500 \\ .035 \\ \hline 12500 \end{array}$$

$$\begin{array}{r} 12500 \\ 75000 \\ \hline 87500 \end{array}$$

$$I = 87.5$$

②

$$I = P \cdot r \cdot t$$

$$I = ?$$

$$P = 280$$

$$r = 4.25\% = .0425$$

$$t = 5$$

$$\begin{array}{r} 280 \\ 5 \\ \hline 1400 \end{array} \left\{ \begin{array}{r} .0425 \\ 1400 \\ \hline 170000 \\ 425000 \\ \hline 595000 \end{array} \right.$$

$$\$59.50$$

Comparing and ordering is easier all in the same form.

$$\begin{array}{rclcl}
 6.75\% & = & 6.75\% & \textcircled{2} \\
 \text{move decimal 2 places} \rightarrow \underline{.0625} & = & 6.25\% & \textcircled{1} \\
 \frac{7}{100} & = & .07 & = 7.00\% \textcircled{3}
 \end{array}$$

→ make a decimal
then as a percent

Percent to Decimal

$$\begin{array}{l}
 \textcircled{21} \quad 3\% = .03 \\
 \text{Move 2 spaces to left}
 \end{array}$$

Same rules apply

$$\begin{array}{l}
 \textcircled{1} \quad 325\% = \underline{\underline{3.25}} = \frac{\text{Fraction}}{3\frac{1}{4}} = 3\frac{25}{100} \\
 \textcircled{2} \quad 480\% = 4.8 \text{ or } 4.8 \\
 \textcircled{3} \quad \underline{\underline{.006}}\% = .006
 \end{array}$$

$$3.25 = 3 \frac{25}{100} = 3 \frac{1}{4}$$

$$\frac{1}{5}$$

$$= \checkmark$$

$$\checkmark$$

$$0.18$$

$$= .018$$

Percent to Decimal

$$50\% = .5$$

$$3\% = .03$$

$$3.5\% = .035$$

.

* How do we calculate unit rates?

We get the denominator to 1.

example $\frac{10}{2} = \text{a unit rate of } = \frac{5}{1} \xrightarrow{\text{photos per dollar}}$

$\frac{30}{6} = \text{a unit rate of } = \frac{5}{1}$

How do we compare rates?

We get them to a unit rate then compare them.

① shirts $\frac{36}{3} = \frac{12}{1} \leftarrow \text{better buy}$

$\frac{60}{6} = \frac{10}{1}$

② $\frac{42 \text{ flowers}}{7 \text{ vase}} = \frac{6}{1}$

$\frac{54 \text{ flowers}}{9 \text{ vase}} = \frac{6}{1}$

Comparing rates from a word problem

- ① set up ratio
- ② calculate unit rate
- ③ compare to answer question

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$\frac{10 \text{ bracelets}}{5 \text{ friends}} = \text{unit rate of } = \frac{2}{1} \text{ bracelets}$

$\frac{12 \text{ bracelets}}{4 \text{ friends}} = \text{unit rate of } = \frac{3}{1} \text{ bracelets}$

① Set up ratios

$\div 3 \rightarrow$

$$\frac{270 \text{ calories}}{3 \text{ serving}} = \frac{90}{1 \text{ serving}}$$

$\div 3 \rightarrow$

$$\begin{array}{r} 90 \\ 3 \overline{) 270} \\ \underline{27} \\ 0 \end{array}$$

$$\frac{450 \text{ calories}}{5 \text{ serving}} = \frac{90}{1 \text{ serving}}$$

$\div 5 \rightarrow$

② Calculate Unit Rates

$$\begin{array}{r}
 1 \\
 7 \overline{) 52.000} \\
 \underline{49} \\
 30 \\
 \underline{28} \\
 20 \\
 \underline{14} \\
 60 \\
 \underline{56} \\
 40
 \end{array}$$

7.43

$$\frac{3}{4} = \frac{12}{16} \quad \text{as} \quad \frac{4}{8} = \frac{1}{2}$$

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unit Rate

$$\frac{24 \text{ dollars}}{3 \text{ week}} \div 3 = \frac{8 \text{ dollars}}{\text{week}}$$

$$\frac{\$ 52}{7 \text{ wks}} = \frac{\quad}{\quad}$$

% 7 =

$$\begin{array}{r} 7 \overline{) 52.0000} \\ \underline{49} \\ 30 \\ \underline{28} \\ 20 \\ \underline{14} \\ 60 \\ \underline{56} \\ 40 \end{array}$$

Money

$$\frac{7.43}{1 \text{ wks}}$$