

D: Rates Continued

Example:

1. Car A drove 600km in 6.5h while car B drove 900km in 9.5h. To the nearest tenth which car is faster?

Find each car's speed km "per" h. "per" means:

Car A

$$= \frac{600 \text{ km}}{6.5 \text{ h}}$$

$$= 92.307$$

↑ below 5 round "down"

$$= 92.3 \text{ km/h}$$

Car B

$$= \frac{900 \text{ km}}{9.5 \text{ h}}$$

$$= 94.736$$

↑ below 5 round "down"

$$= 94.7 \text{ km/h}$$

Car B is the faster car.

2. A lake loses 4.8cm of water over 5 years. A river loses 74mm from 2004 to 2011. Which loses more water per year?

→ Convert both water amounts to the same unit.

$$4.8 \text{ cm}$$

$$74 \text{ mm} \div 100 = 7.4 \text{ cm}$$

→ Determine cm per year for each body of water.

Lake

$$= \frac{4.8 \text{ cm}}{5 \text{ years}}$$

$$= 0.96 \text{ cm/year}$$

River

$$= \frac{7.4 \text{ cm}}{8 \text{ years}}$$

$$= 0.925 \text{ cm/year}$$

2004, 2005, 2006, 2007, 2008,
2009, 2010, 2011

8 years.

The lake loses more per year.

3. Canadian	USA	Australian	Euro Union
1.00 dollar	0.9968	1.2638	0.7051

Use the above currency table to answer the following:

a) What is the value of \$600 Canadian in Euros?

→ Set up similar ratios. Use the chart to begin.

Canadian
Euro

Chart

$$\frac{\$1}{0.7051} = \frac{\$600}{?}$$

$$\frac{\$1}{0.7051} = \frac{\$600}{?}$$

$\xrightarrow{\times 600}$
 $\xrightarrow{\times 600}$

$$\$1 \times \text{what} = 600$$

whatever you do to the top you do to the bottom.

$$= \$423.06 \text{ Euro}$$

b) \$375 Canadian is how many US dollars?

Canadian
USA

$$\frac{\$1}{0.9968} = \frac{\$375}{?}$$

$$\frac{\$1}{0.9968} = \frac{\$375}{?}$$

$\xrightarrow{\times 375}$
 $\xrightarrow{\times 375}$

$$\$1 \times \text{what} = \$375$$

Do the same ~~to~~ to the bottom.

$$= \$373.80 \text{ USA}$$

c) \$450 Australian is how much Canadian?

Australian
Canadian

$$\frac{1.2638}{1} = \frac{450}{?}$$

$$\times 356.06899$$

$$\frac{1.2638}{1} = \frac{450}{?}$$

$$\times 356.06899$$

= \$356.07 Canadian

1.2638 x what is 450 is difficult
So do $450 \div 1.2638$ instead.

=

Do the same to the bottom.

Assignment. Pg. 60 # 8-18.

