

Examples of test questions

1) 35% of number is 31.5, what is the number?

$$35\% \text{ of } n = 31.5$$

$$0.35n = 31.5$$

$$\frac{0.35n}{0.35} = \frac{31.5}{0.35}$$

$$n = 90$$

2) Find the following

a) 25% of 40

↓ change to decimal

$$0.25 \times 40 = 10$$

b) 34% of 68

$$0.34 \times 68 = 23.12$$

d) 0.5% of 120

$$0.005 \times 120 = 0.6$$

d) 140% of 320

$$1.4 \times 320 = 448$$

3) a) find the missing blanks (Show work...hint sometimes you need to reduce)

a) $34:18 = 17:\underline{9}$

↖ ↗

÷2 ÷2

b) $9:4 = 90:\underline{40}$

↖ ↗

×10 ×10

c) $25:30 = \underline{\quad}:24$

Reduce

$$5:6 = \underline{20}:24$$

↖ ↗

×4 ×4

4) Express the following as a unit rate

a) A truck drives 240 km in 2 hours

$$\begin{array}{l} \div 2 \swarrow \quad 240 \text{ km} / 2 \text{ hr} \quad \searrow \div 2 \\ \quad \quad \quad 120 \text{ km} / 1 \text{ hr} \end{array}$$

b) A women types 80 word is 20 seconds

$$\begin{array}{l} \div 20 \swarrow \quad 80 \text{ word} / 20 \text{ sec} \quad \searrow \div 20 \\ \quad \quad \quad 4 \quad \quad \quad / 1 \text{ sec} \end{array}$$

Or

$$160 \text{ words} / \text{min}$$

5) The population of Nova Scotia is about 1 000 000 and the population of Canada is about 39 000 000. About what percent of the population of Canada is Nova Scotia?

$$\frac{1\,000\,000}{39\,000\,000} \xrightarrow{\text{top} \div \text{bottom}} 0.0256 \xrightarrow{\times 100} 2.56\%$$

6) Find each percent (Show work Mentally)

a) 500% of 200 b) 30% of 140

Ex) 20% of 80

10% of 80 = 8
20% of 80 = 16

100% of 200 = 200
500% of 200 = 1000

10% of 140 = 14
30% of 140 = 42

7) You have \$60 saved in your piggy bank. You want to buy a new shirt that is \$125. The shirt is reduced by 20%. There is 15% tax.

a) Find the discount and the sales price

Discount
20% of Shirt
 0.20×125
\$25

sales price
Cost - Discount \$
 $125 - 25$
\$100

b) Find the sales tax on the sales price and the total price with tax

Sales tax amount
15% of Cost (sales)
 $0.15 \times \$100$
\$15

Cost with tax
Cost + tax \$
 $\$100 + \15
\$115

c) Do you have enough money to buy the shirt?

Have 60
Need \$115 } Not enough

8) Kim & John wrote 2 test. Kim made 14 out of 21 on the test and John made 32 out of 48. Kim says she did better, is this true? SHOW WORK

$\begin{array}{r} K \\ 14 \\ \hline 21 \end{array}$ <p>$0.66 = 66\%$</p>	$\begin{array}{r} J \\ 32 \\ \hline 48 \end{array} = 0.66 = 66\%$	<p>Top ÷ Bott ⇒ Dec</p> <p>↓ ×100</p> <p>%</p>
<p>No both made the same mark.</p>		

9) Jim completed 30% of his homework which is 12 questions.

a) What is his total amount of homework questions did his teacher assign?

$\begin{array}{l} 30\% \text{ of } H = 12 \\ 0.30H = 12 \\ \div 0.30 \quad \div 0.30 \\ \hline H = 40 \end{array}$	<p>Total Homework is 40 questions</p>
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b) How many questions does he have left to do?

$$40 - 12 = 28 \text{ questions left.}$$

