

Warm Up Grade 8

April 7



Use Mental Math

30% of 250

$$\begin{array}{l} \times 3 \quad 10\% \text{ of } 250 = 25 \\ \boxed{30\% \text{ of } 250 = 75} \quad \times 3 \end{array}$$

$$25\% \text{ of } 3600 = 900$$

like $\div 4$

Use a calculator for the following

21.5% of 1800

change to decimal x number

(by $\div 100$)

$$0.215 \times 1800$$

$$\boxed{387}$$

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5) a) $120\% = 1.2$

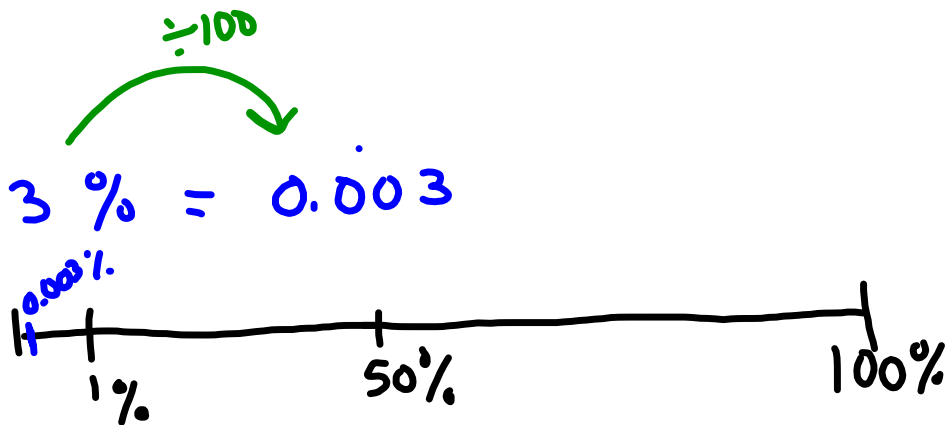


b) $250\% = 2.5$

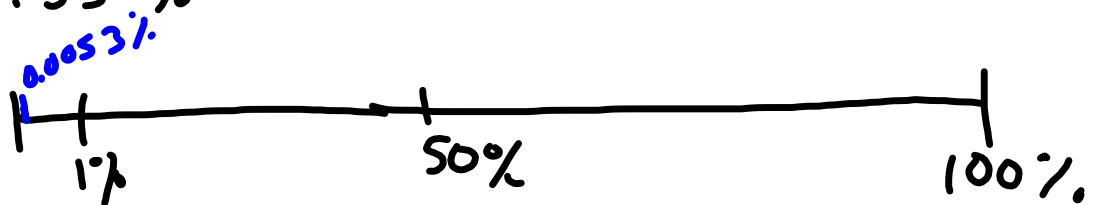


c) $475 = 4.75$

★ d) $0.3\% = 0.003$



e) $0.53\% = 0.0053$



f) $0.75\% = 0.0075$

#5,6,10, 11

	Dec	Percent	Fraction
★ a)	1.7	170%	$\frac{170}{100} = \frac{17}{10} = 1\frac{7}{10}$
★ b)	3.3	330%	$\frac{330}{100} = \frac{33}{10} = 3\frac{3}{10}$
★ c)	0.003	0.3%	$\frac{3}{1000} =$
★ d)	0.0056	0.56%	$\frac{56}{10000} = \frac{28}{5000} = \frac{14}{2500} = \frac{7}{1250}$

$$b) i) \frac{1}{3} = 0.\overline{33} = 33.\overline{3}\%$$

$$ii) \frac{2}{3} = 0.\overline{6} = 66.\overline{6}\%$$

$$iii) \frac{3}{3} = 1 = 100\%$$

$$iv) \frac{4}{3} = 1.\overline{3} = 133.\overline{3}\%$$

$$v) \frac{5}{3} = 1.\overline{6} = 166.\overline{6}\%$$

$$vi) \frac{6}{3} = 2 = 200\%$$

b) As the numerator increases by 1 the percent increases by $33.\overline{3}\%$

$$c) i) \frac{7}{3} = 2\frac{1}{3} = 2.\overline{3} = 233.\overline{3}\%$$

$$ii) \frac{8}{3} = 2\frac{2}{3} = 2.\overline{6} = 266.\overline{6}\%$$

$$iii) \frac{9}{3} = 3 = 300\%$$

$$iv) \frac{10}{3} = 3\frac{1}{3} = 3.\overline{3} = 333.\overline{3}\%$$

$$v) \frac{11}{3} = 3\frac{2}{3} = 3.\overline{6} = 366.\overline{6}\%$$

$$vi) \frac{12}{3} = 4 = 400\%$$

$$1) \star i) 200\% \text{ of } 360$$

$$\begin{array}{l} \times 2 \left(\begin{array}{l} 100\% \text{ of } 360 = 360 \\ 200\% \text{ of } 360 = 720 \end{array} \right) \times 2 \end{array}$$

$$\star ii) 20\% \text{ of } 360$$

$$\begin{array}{l} \times 2 \left(\begin{array}{l} 10\% \text{ of } 360 = 36 \\ 20\% \text{ of } 360 = 72 \end{array} \right) \times 2 \end{array}$$

$$\star iii) 2\% \text{ of } 360 =$$

$$\begin{array}{l} \times 2 \left(\begin{array}{l} 1\% \text{ of } 360 = 3.6 \\ 2\% \text{ of } 360 = 7.2 \end{array} \right) \times 2 \end{array}$$

$$\star iv) 0.2\% \text{ of } 360$$

$$\begin{array}{l} \times 2 \left(\begin{array}{l} 1\% \text{ of } 360 = 3.6 \\ 2\% \text{ of } 360 = 7.2 \end{array} \right) \times 2 \\ \div 10 \left(\begin{array}{l} 0.2\% \text{ of } 360 = 0.72 \end{array} \right) \div 10 \end{array}$$

b) The digit moves one place to the right each time you decrease your percent by a factor of 10

$$c) 2000\% \text{ of } 360 = 720$$

$$\begin{array}{l} \times 10 \left(\begin{array}{l} 100\% \text{ of } 360 = 360 \\ 1000\% \text{ of } 360 = 3600 \end{array} \right) \times 2 \\ \times 2 \left(\begin{array}{l} 2000\% \text{ of } 360 = 7200 \end{array} \right) \times 2 \end{array}$$

$$ii) 0.02\% \text{ of } 360$$

$$\begin{array}{l} \div 100 \left(\begin{array}{l} 2\% \text{ of } 360 = 7.2 \\ 0.02\% \text{ of } 360 = 0.072 \end{array} \right) \div 100 \end{array} \text{ from above}$$

Percents greater than 100% are used by store owners to calculate the prices of items they sell.

A store has to make a profit; that is, to sell goods for more than the goods cost to buy.

A store manager buys merchandise from a supplier. The price the manager pays is called the *cost* price. The manager *marks up* the cost price to arrive at the *selling price* for the customer. The markup is the *profit*.

$$\text{Cost price} + \text{Profit} = \text{Selling price}$$

The cost price of a winter coat is \$80.
The selling price of the coat is 230% of the cost price.
What is the selling price of the coat?
Illustrate the answer with a number line.

230% of Cost
↓
Change to decimal
(÷ by 100)
2.30 X \$80
\$184

hint change % to decimal

Can use calculator but
MUST show work

Selling price of the
coat is \$184



In 2004, the population of First Nations people living on reserves in Alberta was 58 782.

About 0.28% of these people belonged to the Mikisew Cree band.

a) About how many people belonged to the Mikisew Cree band?

b) Estimate to check the answer is reasonable.

0.28% of 58782

↓ change
to decimal
($\div 100$)

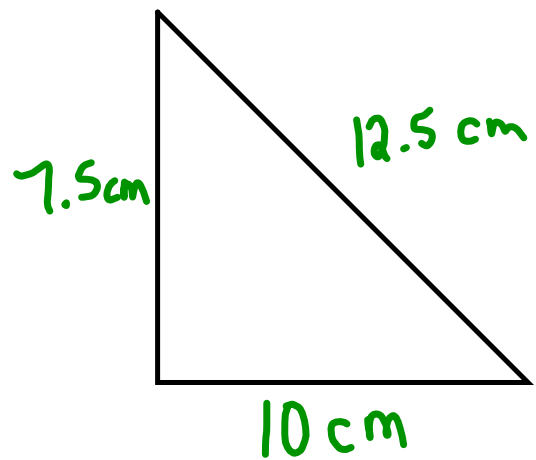
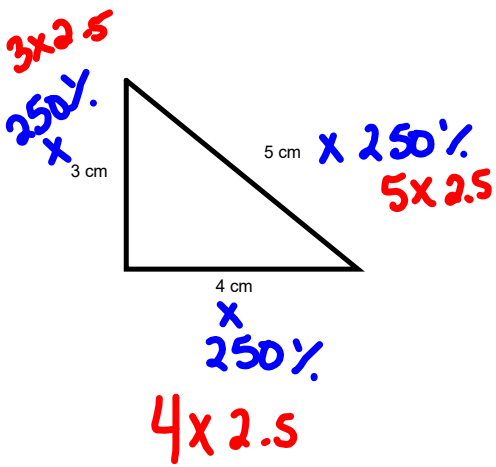
$$0.0028 \times 58782$$

$$164.5896$$

$$\approx 165 \text{ people}$$

About 165
people belong
to Mikisew
Cree band.

This shape represents 100%. Draw a shape that represents 250%.



At the movie theatre, 1550 people attended in one week.
The next week the attendance increased by 125%.

- How many people went to the movie theatre the second week?
- Estimate to check your answer is reasonable.



125% of 1550

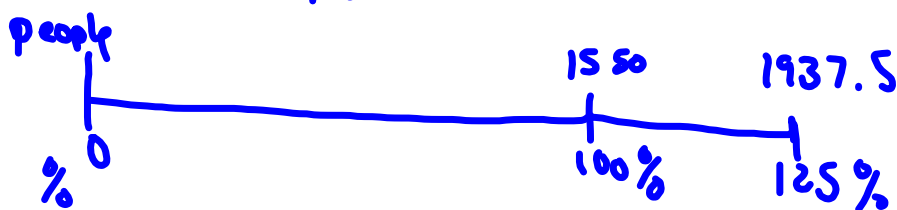


$$1.25 \times 1550$$

$$1937.5$$

$$\approx 1938$$

During the 2nd
week 1938 people
went to the movies.



Class/Homework

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Page 247 #15, 16bc, 17

Show all work

pg. 240 #16-19
pg. 245 #1,2,5,6,7