Warm Up Grade 8

Feb. 24, 2016

Use Mental Math

30% of 250

10% of 250 = 25 (like ÷ by 10)

x3 → 30% of 250 = 75 → x3

1% of 3600 = 36 (x4)

4% of 3600 = 144 (x4)

24% of 3600

10% of 3600 = 360 (x2)

20% of 3600 = 720

To find 24% add 20% + 4%

720 + 144

24% of 3600 = 864

On test Study

Use a calculator for the following

21.5% of 1800

Step 1 change % to a decimal

(% by 100 to get decimal)

21.5% is 0.215 as a decimal

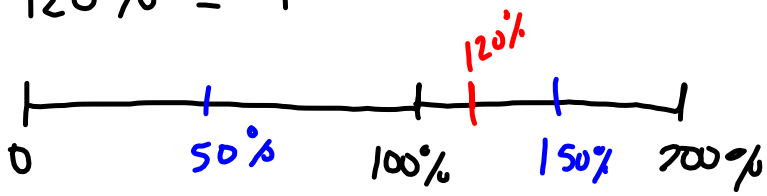
Step 2 decimal of X 1800

= 0.215 X 1800

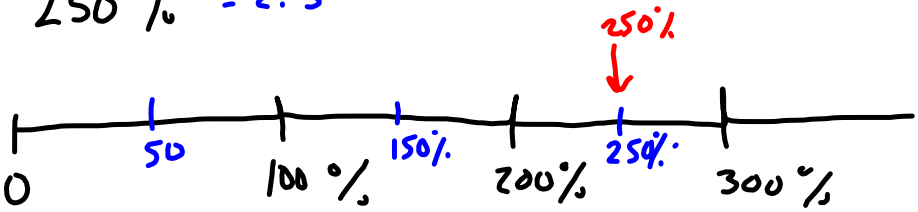
= 387

Pg 246

5) a) 120% = 1.2

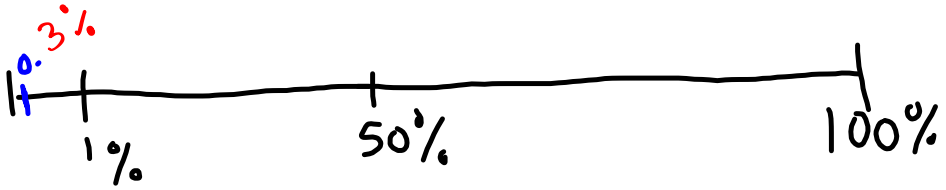


b) 250% = 2.5

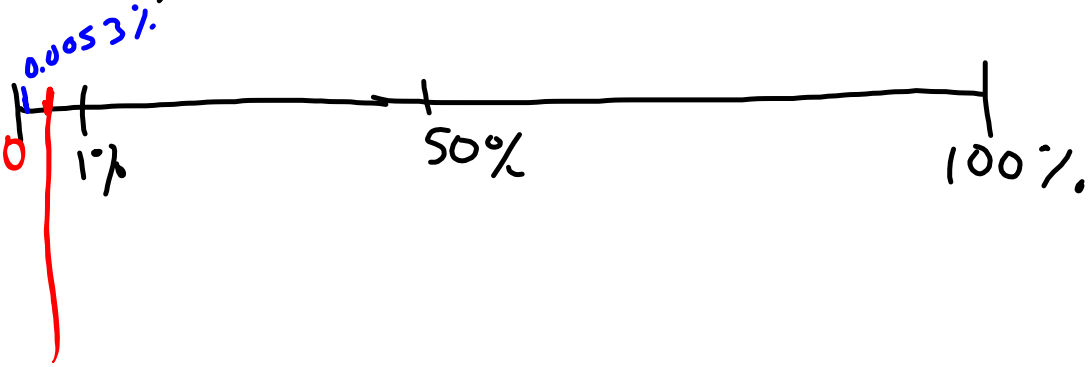


c) 475 = 4.75

d) 0.3 % = 0.003



e) 0.53 % = 0.0053



f) 0.75 % = 0.0075

#5,6,10, 11

		×100 → Percent	Fraction
6) 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%	$\frac{56}{10000} = \frac{28}{5000} = \frac{14}{2500} = \frac{7}{1250}$

10) 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) $\frac{4}{3} = 1.\overline{3} = 133.3\%$

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) $\frac{11}{3} = 3\frac{2}{3} = 3.\overline{6} = 366.6\%$

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

1) a i) 200 % of 360

100% of 360 = 360 (×2)

200% of 360 = 720

ii) 20 % of 360

10 % of 360 = 36 (×2)

20% of 360 = 72

iii) 2 % of 360 =

1 % of 360 = 3.6 (×2)

2% of 360 = 7.2

iv) 0.2 % of 360

1 % of 360 = 3.6 (×2)

2% of 360 = 7.2 (÷10)

0.2% of 360 = 0.72

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

c) 2000 % of 360 = 720

100% of 360 = 360 (×10)

1000% of 360 = 3600 (×2)

2000% of 360 = 7200

i) 0.02 % of 360

2 % of 360 = 7.2 (÷100) from above

0.02% of 360 = 0.072

15% of 40 =

10% of 40 = 4

÷2 ÷2

5% of 40 = 2

15% = 10% + 5%

15% of 40 = 4 + 2

= 6

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*.

Cost price + Profit = 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 Price

230% of 80

230% X 80

↓ change to decimal

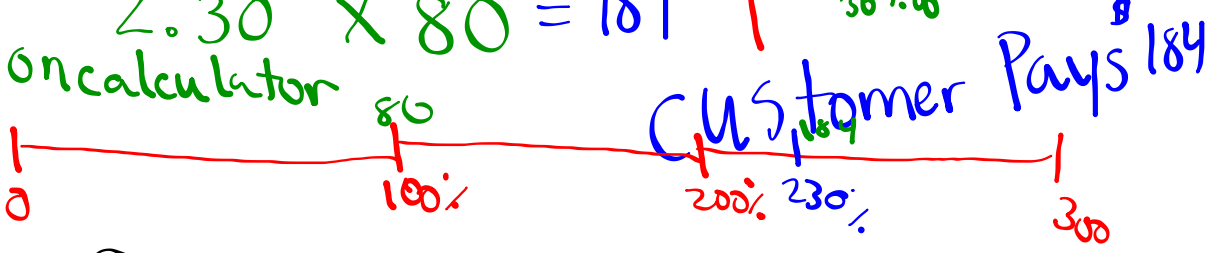
2.30 X 80 = 184

hint change % to decimal

Can use calculator but MUST show work

100% of 80 = 80
X2 X20
200% of 80 = 160
10% of 80 = 8
X3
30% of 80 = 24

184



Profit = Sell price − Cost
= 184 − 80
= $104

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.

a) Estimate
0.28% is close to 0.25% $\left(\frac{1}{4}\%\right)$

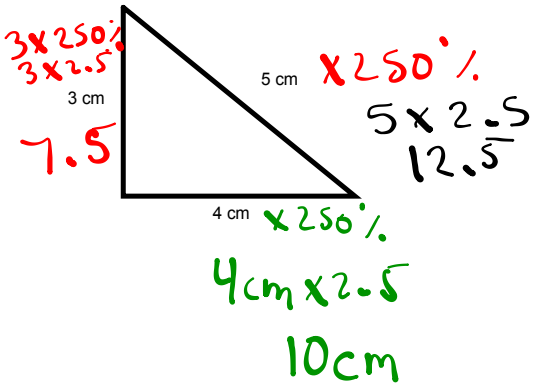
1% of 58782 = 587.82
$\approx$ 587
÷4 ÷4

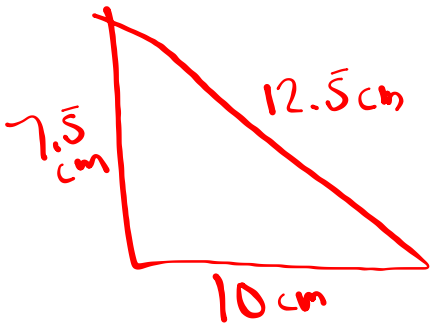
$\approx$ 0.25% of 58782 $\approx$ 146
÷4 ÷4

Calculate
0.28% of 58782
Change to decimal (÷ by 100)

0.0028 X 58782 $\approx$ 164.5896
$\approx$
164

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





250% x5

100% of 5 = 5

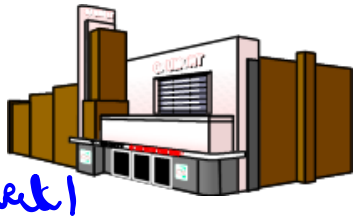
x2

200% of 5 = 10

50% of 5 = 2.5

12.5

At the movie theatre, 1550 people attended in one week.
The next week the attendance increased by 125%.
a) How many people went to the movie theatre the second week?
b) Estimate to check your answer is reasonable.



a) 125% of People who attended week 1

125% of 1550

↓ change to decimal (÷ by 100)

1.25 x 1550

1937.5

Class/Homework

Page 246 #7, 12,
Page 247 #14, 15, 16, 17

Show all work

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