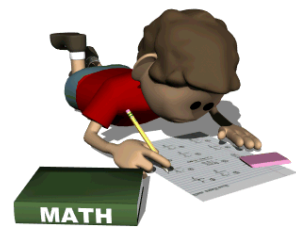


Warm Up Grade 8

Date: Oct. 14



No calculators $\text{dec} \xrightarrow{\times 100} \%$

1) a) What is 0.124 as a percent? **12.4 %**

b) Write $\frac{13}{20}$ as a percent.

20

$$\frac{13}{20} = \frac{65}{100}$$

Diagram showing the conversion of the fraction $\frac{13}{20}$ to $\frac{65}{100}$. A red arrow labeled $\times 5$ points from the numerator 13 to 65. Another red arrow labeled $\times 5$ points from the denominator 20 to 100.

65 %

Use Calculator

2) Jim made $\frac{14}{56}$ and Bob made $\frac{5}{25}$ on a test. Who made the better mark?

56

25

$$\frac{14}{56} \div 7 = \frac{2}{8} \div 2 = \frac{1}{4} \xrightarrow{\times 25} \frac{25}{100} = 25 \%$$

$$\frac{5}{25} \xrightarrow{\times 4} \frac{20}{100} = 20 \%$$

OR

Calculator $\text{Top} \div \text{Bott} = \text{Dec} \xrightarrow{\times 100} \%$

$$14 \div 56 = 0.25 \Rightarrow \times 100 = 25 \%$$

$$5 \div 25 = 0.20 \Rightarrow \times 100 = 20 \%$$

You had 1-4

WORKSHEET

Solutions

Evaluate each and show work

$$\begin{array}{l} 25\% \text{ of } 80 = 20 \\ \times 3 \end{array}$$

1) 75% of 80 = 60

$$\begin{array}{l} 25\% \text{ of } 80 = 20 \\ \times 3 \\ 75\% \text{ of } 80 = 60 \end{array}$$

$$\begin{array}{l} 10\% \text{ of } 600 \\ \times 6 \end{array}$$

2) 10% of 600 = 60

$$\begin{array}{l} 25\% \text{ of } 100 \\ \times 4 \end{array}$$

3) 25% of 100 = 25

=25

$$\begin{array}{l} 40\% \text{ of } 110 \\ 10\% \text{ of } 110 = 11 \\ \times 4 \\ 40\% \text{ of } 110 = 44 \end{array}$$

$$\begin{array}{l} 30\% \text{ of } 70 \\ 10\% \text{ of } 70 = 7 \\ \times 3 \\ 30\% \text{ of } 70 = 21 \end{array}$$

$$\begin{array}{l} 40\% \text{ of } 20 \\ 10\% \text{ of } 20 = 2 \\ \times 4 \\ 40\% \text{ of } 20 = 8 \end{array}$$

7) 70% of 80

$$10\% \text{ of } 80 = 8$$

$$70\% \text{ of } 80 = 7 \times 8 = 56$$

8) 80% of 50

$$10\% \text{ of } 50 = 5$$

$$80\% \text{ of } 50 = 5 \times 8 = 40$$

9) 70% of 180

$$10\% \text{ of } 180 = 18$$

$$70\% \text{ of } 180 = 7 \times 18 = 126$$

10) 80% of 90

$$10\% \text{ of } 90 = 9$$

$$80\% \text{ of } 90 = 9 \times 8 = 72$$

11) 5% of 80

$$10\% \text{ of } 80 = 8$$

$$5\% \text{ of } 80 = 8/2 = 4$$

12) 3% of 30

$$1\% \text{ of } 30 = 0.3$$

$$\begin{array}{l} 3\% \text{ of } 30 = 0.3 \times 3 \\ = 0.9 \end{array}$$

13) 2% of 100

$$1\% \text{ of } 100 = 1$$

$$2\% \text{ of } 100 = 1 \times 2 = 2$$

14) 4% of 160

$$1\% \text{ of } 160 = 1.6$$

$$\begin{array}{l} 4\% \text{ of } 160 = 1.6 \times 4 \\ = 6.4 \end{array}$$

15) 20% of 2700

$$10\% \text{ of } 2700 = 270$$

$$20\% \text{ of } 2700 = 270 \times 2 = 540$$

14) 20% of 160

$$20\% \text{ of } 160 = 16 \times 2 = 32$$

75% of 80

~~$25\% \text{ of } 80 = 20 \times 3 = 60$~~

$\times 3 \rightarrow 75\% \text{ of } 80 = 60 \leftarrow \times 3$
 $25\% \text{ of } 80 = 20$

1) Mentally calculate

a) 60% of 50

$$\begin{array}{l} 10\% \text{ of } 50 = 5 \\ \times 6 \\ \hline 60\% \text{ of } 50 = 30 \end{array}$$

b) 75% of 36 $\boxed{27}$

$$25\% \text{ of } 36 = 9 \quad \times 3$$

c) 12% of 70

$$\begin{array}{l} \checkmark 10\% \text{ of } 70 = 7 \\ 1\% \text{ of } 70 = 0.7 \\ \times 2 \\ \hline \checkmark 2\% \text{ of } 70 = 1.4 \end{array}$$

2) Express the fraction as a percent. $\frac{21}{28}$

$$\frac{21}{28} \div 7 = \frac{3}{4} \times 25 = \frac{75}{100} = 75\%$$

$$12\% \text{ of } 70 = 8.4$$

1%, 10%, 25%, 50%, 100%

↓
X by 0.01
Same as
÷ by 100

↓
X by 0.1
Same as
÷ by 10

↓
X by 0.25
Same as
÷ by 4

↓
X by 0.5
Same as
÷ by 2

Relates
% 2 3, 4, 5, 6, 7, 8, 9

Relates
to

10 60
20 70
30 80
40 90 %
50

Relates
25
50 %
75
100

Relates
50 %
100 %

Estimating

-close to

49% of 82

$$\approx 50\% \text{ of } 82 = 41$$

25% of 98

$$\approx 25\% \text{ of } 100 = 25$$

9% of 75

$$\approx 10\% \text{ of } 75 = 7.5$$

Finish sheet from Last day

Worksheet Gr 8 Day 2 Percent of
Number & Estimating on next 2 pages as well

Grade 8 Percent of a Number day 2 Mentally

Show work to calculate the following:

(a) 10 % of 90

(b) 50 % of 42

(c) 25% of 60

(e) 75 % of 24

(f) 15% of 80

(g) 1 % of 38

(i) 11% of 120

(j) 30% of 15

(k) 2% of 400

Use estimation to estimate the following

1) 9% of 160

2) 24% of 80

3) 51% of 40

5) 11% of 110

6) 29% of 60

7) 42% of 20

9) 25% of 20

10) 50% of 300

11) 50% of 60

13) 10% of 440

14) 20% of 500

15) 30% of 180

17) At the local music concert 300 people attended. 40% of the people were adults and the rest were students.

A) How many adults attended?

B) How many students attended