

Apprenticeship Math 12
ASSIGNMENT: Percent

Name: _____

Date: Feb. 6.

percent: a ratio whose second term is 100

$$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$$

"out of"

100

Show your work... don't forget to include a % sign when you need to!
Unless otherwise specified, round any decimal answers to the nearest tenth.

one decimal place!

1. Find the missing term.

a) $\frac{25}{100} = \frac{50}{x}$

x = _____

b) $\frac{25}{100} = \frac{x}{50}$

x = _____

c) $\frac{x}{100} = \frac{50}{75}$

x = _____

d) $\frac{60}{100} = \frac{180}{x}$

x = _____

e) $\frac{40}{100} = \frac{20}{x}$

x = _____

2. Convert the following percents to decimals. Do not round your answers.

a) 78% $\frac{78}{100} = 78 \div 100$

0.78

b) 93%

c) 125%

d) 324%

e) 0.5%

3. Calculate the following.

a) 15% of 300

~~$\frac{15}{100} = \frac{x}{300}$~~

(OR) 15% of 300
 $= 0.15 \times 300$

45

b) 45% of 1500

c) 140% of 70

d) 175% of 24

e) 7.8% of 50

4. Calculate the following percents. *find %*

a) 65 out of 325

$\frac{65}{325} = 65 \div 325$
 $= 0.2$

(OR)

$\frac{x}{100} = \frac{65}{325}$

20%

b) 135 out of 405

0.2×100
 $= 20\%$

c) 68 out of 40

d) 13 out of 65

e) 625 out of 50

5. Calculate the following.

a) 6 is 12% ^{"out of"} of what number?

$$\frac{12}{100} = \frac{6}{x}$$

b) 9 is 0.3% of what number?

6. About 90% of the mass of an apple is water. What is the mass of water for an apple that weighs 140 g?

7. The rule of thumb for purchasing downhill skis is that the length of your skis should be 5% more than your height. How long should the skis be for a person who is 160 cm tall?

8. About 8% of the mass of the human body is blood. What is the approximate mass of blood for a person who 70 kg?

9. Suzie scored 40 out of 48 on her elephant grooming proficiency test. What percent did she get?

10. Jon scored 25 out of 30 on his welding test. He needs 85% to pass. Did he?

11. On Spirit Day, 75% of the Grade 11s wore school colors. If 141 Grade 11s wore school colors, how many students are in Grade 11? _____

12. The average Canadian generates about 600 kg of solid waste per year. How much of this waste is:

a) paper (32%) _____ kg

b) metal and glass (15%) _____ kg

c) food waste (12%) _____ kg

d) yard waste (10%) _____ kg

e) plastics (8%) _____ kg

f) other (23%) _____ kg

1. a) 200 b) 12.5 c) 66.7 d) 300 e) 50
2. a) 0.78 b) 0.93 c) 1.25 d) 3.24 e) 0.005
3. a) 45 b) 675 c) 98 d) 42 e) 3.9
✓ a) 20% b) 33.3% c) 170% d) 20% e) 1250%
a) 50 b) 3000
6. 126 g
7. 168 cm
8. 5.6 kg
9. 83.3%
10. No (he only got 83.3%)
11. 188 students
12. a) 192 kg b) 90 kg c) 72 kg d) 60 kg e) 48 kg f) 138 kg