Math 8 Assignment
Chapter 3 Percentages Review

Name: Gantuya R.
Date:

1) Write each percent as a decimal. **(2 marks – ½ mark each)**

a. 32%

$=32\div100$

$=0.32$

b. $9.\overline{3}\%$

$=9.\overline{3}\div100$

$=0.09\overline{3}$

c. 125%

$=1.25$

d. $11\frac{1}{4}\%$

$=11\times4+1=45$

$=45\div100$

$=0.45$

2) Write each decimal or fraction as a percent. **(2 marks – ½ mark each)**

a. $\frac{5}{8}$

$=5\div8=0.625$

$=0.625\times100$

$=62.5\%$

b. 0.05

$=0.05\times100$

$=5\%$

c. 0.0001

$=0.01$

d. $\frac{7}{4}$

$=7\div4=1.75$

$=1.75\times100=175\%$

3) Find each percent of a number. **(2 marks- ½ mark each)**

a. 15% of 75

$=15\div100$

$=0.15$

$=0.15\times45$

$=11.25$

b. 6.2% of 450

$=0.062\times450$

$=27.9$

c. $12\frac{1}{2}\%$ of 150

$=12\times2+1=25$

$=0.25\times150$

$=37.5$

d. 125% of 36

$=1.25\times36$

$=45$

4) Find the missing percent. Round to the nearest percent. **(2 marks – ½ mark each)**

a. 20 % of 200 is 40

$100\div200\times40$

$=20$

b. 30 % of 250 is 75

c. 325 % of 16 is 52

d. 1.2 % of 16.5 is 0.198

5) Find the number (or find 100% of the number). **(4 marks – 1 mark each)**

a. 60% of a number is 78.

$=100 \div 60 \times 78$

$=130$

b. 5% of a number is 87.

$=1740$

c. 27% of a number is 135.

$=500$

d. 4.5% of a number 13.5.

$=300$

6) Calculate each amount. **(4 marks – 1 mark each)**

a. 35% of $52.00

$=0.35 \times 52$

$=\$18.2$

b. 8.5% of $500

$=\$42.5$

b. 76% of $1.25

$=0.95$

d. 12% of $370

$=\$44.4$

7) Complete the following table. These items were bought in Ontario and the G.S.T. is 7% and P.S.T. is 8% in that particular province. You can use the space below the table to show your work. **(4 marks – ½ each blank)**

ITEM	Original Price	Discount %	Sale Price (after discount)	G.S.T.	P.S.T.	Total Cost
T-Shirt	$20.00	10%				
Belt	$75	25%				

8) Complete the following table by writing the original price as a percent of the new price. **(2 marks – 1 each)**

Original Price	New Price	Percent
$7.50	$12.00	**7.50/12=62.5% Original price is 62.5% of new price**
$918	$1303.56	**918/1303.56 = 70.42% Original Price is 70.42% of new price**

The following word problems are all worth 1 mark. Answer with a complete sentence.

9) The area of Moscrop Secondary School is 48% of the area of Metropolis at Metrotown mall. The mall area is 18 250 m^2. What is the area of Moscrop Secondary School?

Moscrop's area = Mall Area x 0.48
= 18,250m^2 x 0.48
= 8760 m^2

10) Ernie and Bert bought an old bike for $20.00. They repaired it and sold it for $75.00. What was their selling price as a percent of their buying price? (They made a lot of money, eh?)

Selling price : $75 Buying price $20
75 / 20 = 3.75 The selling price is 375% of the buying price

11) The elevation of Moose Jaw above sea level is 265% of the elevation of Vancouver. The elevation of Vancouver is 50 metres. What is the elevation of moose Jaw?

Moose Jaw Sea level = Vancouver level x 265%
= 50 x 265%
= 50 x 2.65
= 132.5 m
The elevation of Moose Jaw is 132.5m above sea level

12) On Wednesday at the school cafeteria, 62.5% of the 192 hot meals served were the daily special. How many daily specials were served?

Number of Daily specials = 62.5% x 192
= 0.625 x 192
= 120 **120 daily specials were served on Wednesday**

13) What is the sale price of a $27.50 book at 20% off?

Sale Price = 27.50 x 0.80
= $ 22 The sale price of the book is $22

14) Luigi sold a $285 000.00 house for a commission of 5.6% of the purchase price. How much commission did he earn?

Commission earned = 285,000 x 5.6%
= 285,000 x 0.056
= $15, 960
Luigi earned $15,960 in commission

15) On James' first birthday, his height was 80 cm. His height on his second birthday was 108% of his height on the first birthday. His height on his third birthday was 115% of his height on his second birthday. How tall was James on his third birthday?

James Height on his third birthday = 80cm x 1.08 x 1.15
= 99.36cm
James was 99.36cm tall on his third birthday

16) A CD was on sale at 15% off of the regular price. The price was then increased by 15% of the sale price. Was the final price the same as the regular price? Explain either in words or with an example using numbers.

Suppose the CD was $10. If it is on sale at 15% off, the discount would be $1.50 and the CD will now be worth 8.50.
If the price went up 15% from 8.50, we would multiply 8.50 by 1.15. That would give us $9.78. So increasing by 15% after decreasing by 15% will not bring the price back to what is was before

Problems #17 to #20 are all worth 2 marks.

17) Danny lend $815 000 to Benny for a 3 year term, the rate of return was 9% per year. How much would Benny have to return at the end of the 3 year term? Round to the nearest penny.

Rate of return means that each year Danny will earn 9% interest from Benny. At the end of three years, Benny would return the following amount to Danny:

Amount = 815,000 x 1.09 x 1.09 x 1.09 (multiply by 1.09 b/c for 3 years)
= $1, 055,448.64

18) The regular price of a sweater was $125. For a sale, the price was reduced by 25%. A week later, the price was reduced by an additional 20% off the first sale price.

a. What was the final sale price?
b. What percent of the regular price was the final sale price?

a) Final price = 125 x 0.75 x 0.80
= $75

b) Final Price is $75, Regular price was $120.
75/120 = 0.625
The final price is 62.5% of the regular price

19) Benny invited his friends to Stepho's for Greek food. They ordered 6 rack of lambs. Each rack of lambs cost $12.50. Considering that they had to pay for the cost of the food, the tax (assume GST and PST in BC), as well as leaving a 15% tip, how much do they have to pay altogether?

Total cost before tax and tips = 12.50 x 6
= $75

Total cost including tax and tips = $75 x 1.12 x 1.15
= $96.60

20) Nancy shops at the Bay each time they have their scratch and save days. Last time, she bought a pretty pink dinner dress. The original price was $250. The sign on the clothing rack said the item was 30% off. She then went to the counter to receive her scratch and save card and received an additional 25% off the price. Then she applied for a Bay credit card and they gave her an additional 10% off. After all the discounts and all the taxes, how much did Mrs. Lee pay for her pretty pink dinner dress? Round your answer to the nearest cent.

Price after all discounts: $250 x 0.70 x 0.75 x 0.75 = $98.44

Final price including tax = 98.44 x 1.12 = $110.25