Homework Solutions

Name: **Answers**

Grade 8
Unit 3 Part 1– Percent Test Review WS

Show work for all questions

1. Write the following as a Decimal and a percent.

1. $\dfrac{6 \times 20}{5 \times 20} = \dfrac{120}{100}$

   $= 120\%$
   $= 1.20$

2. $\dfrac{18 \times 5}{20 \times 5} = \dfrac{90}{100}$

   $= 90\%$
   $= 0.9$

3. $\dfrac{75}{100} = \dfrac{3}{4}$ ($\div 25$)

   $= 75\%$
   $= 0.75$

4. $\dfrac{18}{48} = \dfrac{9}{24} = \dfrac{3}{8}$

   $= 0.375$
   $= 37.5\%$

5. $\dfrac{7}{9} = 0.\overline{7}$

   $= 77\%$

6. $\dfrac{16}{3} = 5.\overline{33}$

   533%

2. The tax rate in NB is 15%. If a coat costs $145, what is the **total cost** of the coat?

Tax $= 15\% \times$ Price
$= 0.15 \times 145$
$= \$21.75$

Cost $\tilde{w}$ tax $=$ Price + Tax
$= \$145 + \$21.75$
$= \$166.75$

3. Raymod made 44 out of 50 on a test and Nancy made 18 out of 20 on a test. Show work on how you can determine who did better.

R $\Rightarrow \dfrac{44 \times 2}{50 \times 2} = \dfrac{88}{100} = 88\%$

N $\Rightarrow \dfrac{18 \times 5}{20 \times 5} = \dfrac{90}{100} = 90\%$

Nancy did better.

4. Estimate the following (Show work)

a) 8.9% of 164

$\approx 10\% \text{ of } 164$
≈ 16.4

b) 4.6 % of 240

$\approx 5\%$
$10\% \text{ of } 240 = 24$ ($\div 2$)
$5\% \text{ of } 240 = 12$

c) 18% of 44

$20\% \text{ of } 44$
$10\% \text{ of } 44 = 4.4$ ($\times 2$)
$20\% \text{ of } 44 = 8.8$

d) 61% of 120

$\approx 60\% \text{ of } 120$
$10\% \text{ of } 120 = 12$ ($\times 6$)
$60\% \text{ of } 120 = 72$

You must show all work to obtain full value.
1. Complete the following chart:

Percent	Decimal	Fraction
14.7%	0.147	$\dfrac{147}{1000}$
55%	0.55	$\dfrac{55}{100} = \dfrac{11}{20}$
10%	0.10	$\dfrac{2}{20} = \dfrac{1}{10} = \dfrac{10}{100}$
13.6 %	0.136	$\dfrac{136}{1000} = \dfrac{63}{500}$

1

#2 & #3 must include all formulas and calculation on paper (You can use the calculator but show your work)

2. A car regularly sells for $ 51 000. It is on sale for 30% off.
(a) Calculate the amount of discount.

Disrount $ = % × Price
= 30% × 51000
= 0.30 × 51 000
= $15 300

(b) Calculate the sale price. (No Tax)

Sales Tax = Price − Discount
= $51000 − $15300
= $ 35700

3. For each item below calculate the tax and the total cost with tax. (Remember HST for NB is 15%)
i) Find the amount of tax that will be paid.   ii) What is the total cost With tax?

a) An Air fryer $229

Tax = 15% of Price
= 0.15 × $229
= $34.35

Cost w̄ tax = Price + Tax
= $229 + $34.35
= $263.35

b) $699.99

Tax = 15% of Price
= 0.15 × $699.99
= $105.00

Cost = tax = Price + tax
= $699.99 + $105.00
= $804.99

4. Mentally calculate the following (show what method you used for the mental calculation. MUST use 1%, 10%, 25%, 50% strategies taught in class)

(a) 15% of 88
10% of 88 = 8.8
+ 5% of 88 = 4.4
15% of 88 = 13.2

(b) 10% of 220
= 22

(c) 70% of 20.8
10% of 20.8 = 2.08   )×7
70% of 20.8 = 14.56

(d) 15% of 230
10% of 230 = 23
+ 5% of 230 = 11.5
15% of 230 = 34.5

e) 25% of 160
= 40

d) 40% of 230
10% of 230 = 23   )×4
40% of 230 = 92

e) 8% of 600
1% of 600 = 6   )×8
8% of 600 = 48

f) 13% of 700
* 10% of 700 = 70
1% of 700 = 7   )×3
*3% of 700 = 21
13% of 700 = 91