# 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. $\frac{6}{5} \overset{\times 20}{=} \frac{120}{100}$ = 120 % = 1.20

2. $\frac{18}{20} \overset{\times 5}{=} \frac{90}{100}$ = 90% = 0.9

3. $\frac{75}{100} \overset{\div 25}{=} \frac{3}{4}$ = 75% = 0.75

4. $\frac{18}{48} = \frac{9}{24} = \frac{3}{8}$ (÷ Both) = 0.375 = 37.5%

5. $\frac{7}{9} = 0.\overline{7}$ = 77%

6. $\frac{16}{3} = 5.\overline{33}$ 533%

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

Tax = 15% x Price = 0.15 x 145 = $21.75

Cost 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 ⇒ $\frac{44}{50} \overset{\times 2}{=} \frac{88}{100}$ = 88%

N ⇒ $\frac{18}{20} \overset{\times 5}{=} \frac{90}{100}$ = 90%

Nancy did better.

4. Estimate the following (Show work)

a) 8.9% of 164 ≈ 10% of 164 ≈ 16.4

b) 4.6 % of 240 ≈ 5% → 10% of 240 = 24 (÷2) → 5% of 240 = 12

c) 18% of 44 → 20% of 44 → 10% of 44 = 4.4 (×2) → 20% of 44 = 8.8

d) 61% of 120 ≈ 60% of 120 → 10% of 120 = 12 (×6) → 60% of 120 = 72

**You must show all work to obtain full value.**

1. Complete the following chart:

| Percent | Decimal | Fraction |
|---|---|---|
| 14.7% (÷100) | 0.147 | $\frac{147}{1000}$ |
| 55% | 0.55 | $\frac{55}{100} = \frac{11}{20}$ |
| 10% | 0.10 | $\frac{2}{20} = \frac{1}{10} = \frac{10}{100}$ |
| 13.6 % | 0.136 | $\frac{136}{1000} \overset{\div 2}{=} \frac{63}{500}$ |

**#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.

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

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

Sales Price = 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 w tax = Price + Tax
= $229 + $34.35
= $263.35

b) $699.99




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

Cost w 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