

SHARP

Worksheet 3 Memorandum – General calculations

Mathematical Literacy – Grade 11

1. a) $\frac{22}{35} \times 100 = 62.9\%$ b) $\frac{17}{18} \times 100 = 94.4\%$
 c) $\frac{23}{34} \times 100 = 67.6\%$ d) $\frac{3000}{24000} \times 100 = 12.5\%$
 e) $\frac{182}{210} \times 100 = 86.7\%$ f) $\frac{3}{7} \times 100 = 42.9\%$
 g) $\frac{1243000}{140350} \times 100 = 88.6\%$ h) $\frac{14-9}{14} \times 100 = 35.7\%$

2.

PRODUCT	COST PRICE	SELLING PRICE	MARK UP
Flour (2.5 Kg)	R 15.51	R22.50	45 %
White sugar (2 Kg)	R 9.40	R 20.21	112.8 ≈ 113 %
Brown Sugar (2 Kg)	R 13.50	R 20.52	52 %
Baking powder (250 g)	R 70.80 per Kg	R28.32	60.7 % ≈ 61 %
Cocoa powder (250 g)	R 42.11 (250 g)	R28.00 per 125 g	33 %
Vanilla essence (250 ml)	R 33.60	R 37.80	31.25 %

3. a) $\frac{36}{4} = 9$ b) $a^2b^3c \times abc^4 \times a.a.b.b.c = a^5b^6c^6$
 c) $\sqrt{361} = 19$ d) $17 \times 3 + 15 - 9 \div 3 + 6 = 69$
 e) $\frac{2}{3} \text{ of } \sqrt{529} = 15\frac{1}{3}$ f) $\frac{3}{4} + \frac{1}{2} - \frac{1}{6} + 1\frac{1}{3} = 2\frac{5}{12}$
 g) $\sqrt[3]{216} \times \frac{\sqrt[5]{243}}{\sqrt[3]{8}} = 9$ h) $R 24 + 30\% = R 31.20$
 i) $12 \times 2 + (13 - 5) \div 6 \times 2 \times 3 \times \frac{1}{4} = 26$
4. a) 1 concentrate : 5 water
 b) $45 \text{ ml} \times 5 = 225 \text{ ml water}$
 c) $45 \text{ ml} + 225 \text{ ml} = 270 \text{ ml}$
 d) $2.5 \text{ cups concentrate} \times 5 = 12.5 \text{ cups} \therefore \text{the drink will be a little bit too strong}$
 e) $1,4 \text{ l} \div 7 \times 2 = 400 \text{ ml of concentrate}$
5. a) $R 57.00 \times 8.5 \text{ hours} = R 484.50$
 b) $10 \text{ hours} \times 6 \text{ days} = 60 \text{ hours (maximum number of hours of work in 1 week)}$
 $60 \text{ hours} \times R 57 = R 3 420$

c) $R 7410 \div R 570 = 13$ work days
(13 work days + 2 days off = 15 days in total,
you must count the days he is not allowed to work)

d) $R 570 - R 145 = R 425.00$ (the amount of maoney he saves per day)
 $R 5\ 100 \div R 425 = 12$ work days
(12 work days + 1 days off because he can only work 6 days out of 7)

6. a) 2.5 hours $\times 60 = 150$ minutes
b) 150 marks $\div 150$ minutes = 1 mark per minute

7. a) $R 11.10 \div 6 = R 1.85$ per egg
b) $R 55.35 \div 450$ g $\times 100$ g = $R 12.30$ per 100 g
c) $R 20.00 \div 2.5$ K $\times 1$ Kg = $R 8.00$ per Kg
d) $R 15.49 \div 600$ g $\times 1000$ g = $R 25.82$ per 1 kg of yogurt
e) $R 18.99 \div 15000$ ml $\times 250$ ml = $R 3.17$

8. a) 17 m $\div 1000 = 0.017$ Km
b) $R 450.89 \times 100 = 45\ 089$ cents
c) 22 days $\times 24 = 528$ hours
d) 300 months $\div 12 = 25$ years
e) $4\ 500$ seconds $\div 60 \div 60 = 1.25$ hours
f) 0.4 grams $\div 1000 = 0.0004$ Kg
g) 200 l $\times 1000 = 200\ 000$ ml
h) 5 weeks $\times 7 \times 24 = 840$ hours