Rusana Banu (26) 4C1 Date 29/1/05 No. 26

Maths D weekend Assignment (week 4)

1)(a) 1cm : 40 000 cm

2.5cm : 100 000cm

= 1km

(b) 1 cm : 40 000 cm

= 400 m

$1cm^2$ = 400 × 400

= $160\,000 m^2$

2)(a) $\frac{2.24}{0.07}$

= 32

(b) $\frac{1}{21} \div -3\frac{1}{3} \times \left[\frac{1}{3} - \frac{1}{5} \times \left(-2\frac{1}{2}\right)\right]$

$= \frac{1}{21} \times -\frac{3}{10} \left[\frac{1}{3} - \frac{1}{5} \times -\frac{5}{2}\right]$

$= -\frac{1}{70} \times \left[\frac{1}{3} + \frac{1}{2}\right]$

$= -\frac{1}{70} \times \frac{5}{6}$

$= -\frac{1}{84}$

3)(a) Time = $\frac{D}{S}$

= $\frac{3}{6}$

= $\frac{1}{2}$ h

= 30 minutes

(b) S = $\frac{D}{T}$

= $\frac{0.5}{2 \div 60}$

= 15 km/h

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4) (a) 100g contains 4.7g protein

3.3 kg contains $\frac{4.7}{100} \times 3300 = 155.1$g protein

(b) $\frac{125}{550} \times 100\% = 23\%$

5) $\frac{0.2031}{\sqrt[3]{17.95 + 6292}}$

$= 0.0519$

6) Area of rectangle

$= 10.5 \times 8.5$

$= 89.25 cm^2$

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Maths D Holiday Homework (Week 4)

Unit 1.1

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1) (i) mn

$= (5 \times 10^{-2})(4 \times 10^{3})$

$= 20 \times 10^{1}$

$= 2.0 \times 10^{2}$

(ii) m^3

$= (5 \times 10^{-2})^3$

$= 125 \times 10^{-6}$

$= 1.25 \times 10^{-4}$

* (iii) $\frac{1}{m} + n$

$= \frac{1}{5 \times 10^{-2}} + 4 \times 10^{3}$

$= (5 \times 10^{-2})^{-1} + (4 \times 10^{3})$

$= (0.2 \times 10^{2}) + (0.4 \times 10^{2})\,10$

$= (0.2 + 4)\,10^{3}$

$= 4.02 \times 10^{3}$

2) $\frac{3.91}{\sqrt{62.6 \times 0.127}}$

$= 1.4$

3) $\sqrt{\frac{2.471}{0.4328 \times 73.54}}$

$= 0.279$

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(c) Average speed = $\frac{\text{Distance}}{\text{Time taken}}$

$= \frac{3 + 0.5}{\frac{1}{2} + \frac{2}{60}}$

$= 6\frac{9}{16}$ km/h

4) (a) (i) $\frac{75}{100} \times 12000 = \$9000$

$\frac{40\,000}{150\,000} \times 100 = 26\frac{2}{3}\%$

$\frac{26\frac{2}{3}}{100} \times 9000 = \$2400$

(ii) $\frac{25}{100} \times 12\,000 = \$3000$

(b) (i) $\frac{80\,000}{150\,000} \times 100 = 53\frac{1}{3}\%$

$\frac{30\,000}{150\,000} \times 100 = 20\%$

$53\frac{1}{3}\% \rightarrow \$6000$

$20\% \rightarrow \$2250$

(5) $36 - 5 = 31$ km

48 kg costs $0.35 \times 48 = \$16.80$

$\$530.40 - \$16.80 = \$513.60$

$\frac{\$513.60}{48} = \$10.70$

$\frac{\$10.70}{36} = \$0.29722$

$\$0.35 - \$0.29722 = \$0.05$

$= 5$ cents