

Year 10 Maths B
HW sheet #8

Q1. a. $3 + 5 \times 10$
 $= 3 + 50$
 $= 53$

b. $4 - 6 \div 2$
 $= 4 - 3$
 $= 1$

c. $7 \times 10 \div 5$
 $= 70 \div 5$
 $= 14$

Q2. a. $\frac{12}{15} + \frac{4}{15}$
 $= \frac{16}{15}$ or $1 \frac{1}{15}$

b. $\frac{3}{7} - \frac{2}{7}$
 $= \frac{1}{7}$

c. $\frac{4}{12} + \frac{1}{3}$
 $= \frac{1}{3} + \frac{1}{3}$
 $= \frac{2}{3}$

Q3. a. $3 \times 3 + 5 \times 5$
 $= 9 + 25$
 $= 34$

b. $5(3+5)$
 $= 5(8)$
 $= 40$

c. $2 \times 3 - 3 \times 5$
 $6 - 15$

Q4. a. $7.2\text{m} = 720\text{cm}$

b. $7890\text{m} = 7.89\text{km}$

c. $567\text{cm} = 5.67\text{m}$

d. $46\text{mm} = 4.6\text{cm}$

e. $3.2\text{cm} = 32\text{mm}$

f. $11\text{m}^2 = 110000\text{cm}^2$

g. $34\text{mm}^2 = 0.34\text{cm}^2$

h. $3\text{cm}^3 = 3000\text{mm}^3$

i. $1.1\text{km}^2 \times 1000000$

$= 1100000\text{m}^2 \times 10000$

$= 11000000000\text{cm}^2$

or $= 1.1 \times 10^{10}\text{cm}^2$

Q5.

a. $P = 33 + 33 + 18 + 18$
 $= 102\text{m}$

b. $A = L \times W$
 $= 33 \times 18$
 $= 594\text{m}^2$

b. $P = 5\text{mm} + 3\text{mm} + 4\text{mm}$
 $= 12\text{mm}$

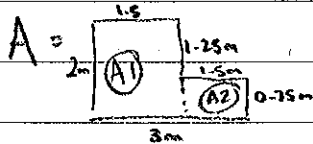
$A = \frac{1}{2} \times b \times h$
 $= \frac{1}{2} \times 4 \times 3$
 $= 6\text{mm}^2$

Q5. c. $P = 2\pi r$ or πD
 $= 2 \times \pi \times 2.5$ or $\pi \times 5$
 $= 15.71 \text{ cm}$

$A = \pi r^2$
 $= \pi \times (2.5)^2$
 $= \pi \times 6.25$
 $= 19.63 \text{ cm}^2$

didn't scan properly

d. $P = 2 + 1.5 + 1.25 + 1.5 + 0.75 + 3$
 $= 10 \text{ m}$



$A_1 = 2 \times 1.5$
 $= 3 \text{ m}^2$

$A_2 = 1.5 \times 0.75$
 $= 1.125 \text{ m}^2$

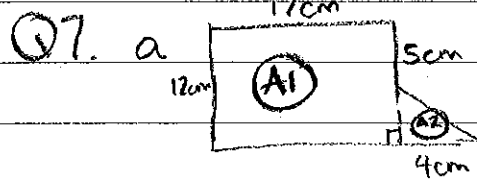
Total Area = $A_1 + A_2$
 $= 3 + 1.125$
 $= 4.13 \text{ m}^2$

Q6. a. $C = 2\pi r$ or πD
 $C = 2 \times \pi \times 6.3$ or $\pi \times 12.6$
 $= 39.58 \text{ cm}$

$A = \pi r^2$
 $= \pi \times (6.3)^2$
 $= \pi \times 39.69$
 $= 124.69 \text{ cm}^2$

b. $C = 2\pi r$ or πD
 $C = 2 \times \pi \times 40$ or $\pi \times 80$
 $= 251.33 \text{ mm}$

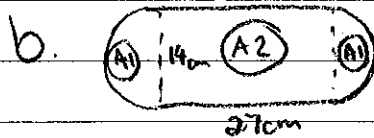
$A = \pi r^2$
 $= \pi \times (40)^2$
 $= 5026.55 \text{ mm}^2$



$A_1 = 17 \times 12$
 $= 204$

$A_2 = \frac{1}{2} \times 4 \times 5$
 $= 10$

$TA = A_1 + A_2$
 $= 204 + 10$
 $= 214 \text{ cm}^2$

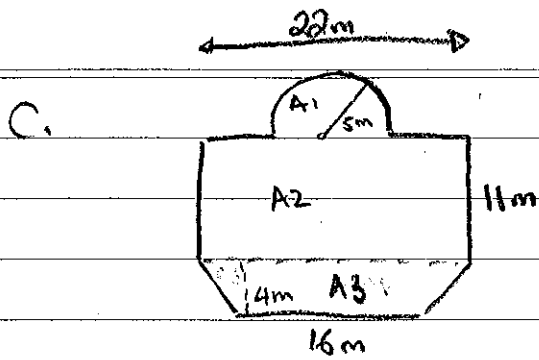


$A_1 = \pi r^2$
 $= (\pi \times 7^2) \div 2$ (semicircle) $\times 2$ (2 shades)
 $= 153.94 \text{ cm}^2$

cancel out

$A_2 = 27 \times 14$
 $= 378 \text{ cm}^2$

$TA = A_1 + A_2$
 $= 153.94 + 378$
 $= 531.94 \text{ cm}^2$



$$A_1 = \frac{1}{2} \times \pi r^2$$

$$= \frac{1}{2} \times \pi \times 5^2$$

$$= 39.27 \text{ m}^2$$

$$A_2 = 11 \times 22$$

$$= 242 \text{ m}^2$$

$$A_3 = \frac{1}{2} \times h \times (a+b)$$

$$= \frac{1}{2} \times 4 \times (16+22)$$

$$= 76 \text{ m}^2$$

$$\text{Total Area} = 39.27 + 242 + 76$$

$$= 357.27 \text{ m}^2$$

Q8. Quantitative data → data that consists of numbers
 Qualitative → data that consists of categories

Q9.

Distance	$\frac{140+142}{2}$	f	xf
140 < 144	142	3	426
145 < 149	147	9	1323
150 < 154	152	6	912
155 < 159	157	9	1413
160 < 164	162	1	162
165 < 169	167	2	334
Total		30	4570

$$\text{mean} = \frac{4570}{30}$$

$$= 152.3 \text{ cm}$$