

S1 Block 2 Revision Sheet

1) (a) $4z - 3x$ (b) $3xyz$ (c) $2xy - z^2$

$$\begin{aligned}
 &= 4 \times 2 - 3 \times 5 \\
 &= 8 - 15 \\
 &= -7
 \end{aligned}
 \quad
 \begin{aligned}
 &= 3 \times 5 \times (-3) \times 2 \\
 &= 15 \times (-6) \\
 &= -90
 \end{aligned}
 \quad
 \begin{aligned}
 &= 2 \times 5 \times (-3) - 2^2 \\
 &= -30 - 4 \\
 &= -34
 \end{aligned}$$

2) (a) $4(a+2) + 3(3-a)$ (b) $5(x-y) - 3(y-4x)$

$$\begin{aligned}
 &= 4a + 8 + 9 - 3a \\
 &= a + 17
 \end{aligned}
 \quad
 \begin{aligned}
 &= 5x - 5y - 3y + 12x \\
 &= 17x - 8y
 \end{aligned}$$

3) (a) $d+d+d+d+d$ (b) $g \times (-4) \times g \times 2$ (c) $-h \times 5 \times (-8) \times g$

$$\begin{aligned}
 &= 5d \\
 &= -8g^2 \\
 &= -40 \times (-gh) \\
 &= 40gh
 \end{aligned}$$

4) a) $3x + 13 + 4x = 41$ b) $25 - 4x = 17$ c) $6(2x - 11) = -18$

$$\begin{aligned}
 7x + 13 &= 41 \\
 7x &= 28 \\
 x &= 4
 \end{aligned}
 \quad
 \begin{aligned}
 4x &= 8 \\
 x &= 2
 \end{aligned}
 \quad
 \begin{aligned}
 12x - 66 &= -18 \\
 12x &= 48 \\
 x &= 4
 \end{aligned}$$

5) a) 6.434
 $= 6.43 \text{ cm (2 d.p.)}$

b) 26.995
 $= 27.00 \text{ (2 d.p.)}$

6) Total weight = 3×56.7 56.7 68.4

$$\begin{array}{r}
 \\[1ex]
 = 170.1 \text{ kg} \\[1ex]
 \hline
 & \begin{array}{r} \times 3 \\[-1ex] \hline 170.1 \end{array} & \begin{array}{r} + 58.8 \\[-1ex] \hline 127.2 \end{array}
 \end{array}$$

Legans weight = $170.1 - (68.4 + 58.8)$
 $= 170.1 - 127.2$
 $= \underline{\underline{42.9 \text{ kg}}}$

7) In order: -4.6 -2.8 -1.4 5.4 13.8

$$\text{Mean} = \frac{\text{total}}{n}$$

$$= \frac{10.4}{5}$$

$$= \underline{\underline{2.08}}$$

$$\begin{array}{r} 13.8 \\ + 5.4 \\ \hline 19.2 \end{array}$$

$$\begin{array}{r} -4.6 \\ -2.8 \\ -1.4 \\ \hline -8.8 \end{array}$$

$$\begin{array}{r} 19.2 \\ - 8.8 \\ \hline 10.4 \end{array}$$

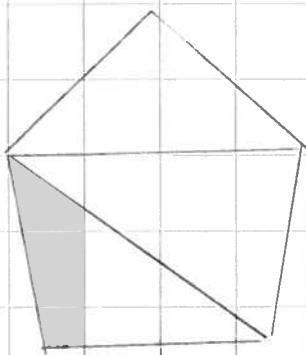
$$\begin{array}{r} 2.08 \\ 5 \mid 10.40 \end{array}$$

$$\text{Median} = \text{middle no.}$$

$$= \underline{-1.4}$$

$$\begin{aligned} \text{Range} &= H - L \\ &= 13.8 - (-4.6) \\ &= 13.8 + 4.6 \\ &= \underline{\underline{18.4}} \end{aligned}$$

8) (a)



$$3 \text{ triangles} = 3 \times 180^\circ = 540^\circ$$

Each internal angle is the same

$$540^\circ \div 5 = \underline{\underline{108^\circ}}$$

(b) For octagon $8 - 2 = 6$ triangles

$$= 6 \times 180^\circ = 1080^\circ$$

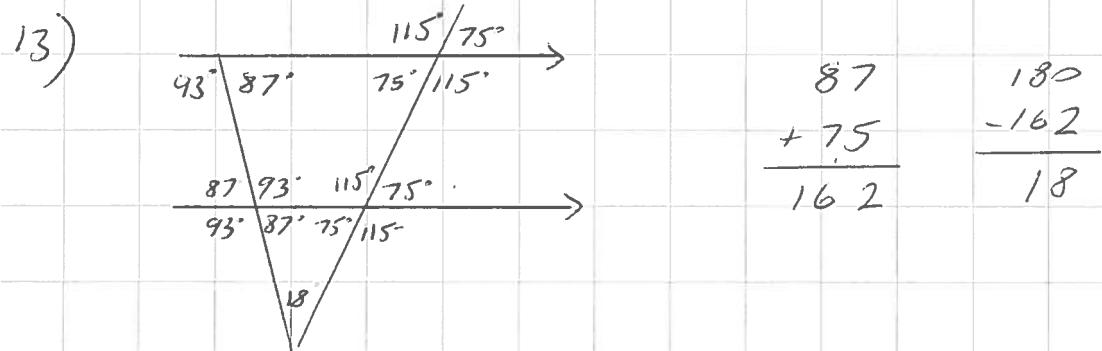
$$1080^\circ \div 8 = \underline{\underline{135^\circ}}$$

$$9) (a) 6 - (-5) = \underline{11 \text{ metres}} \quad (b) 14 - 6 = \underline{8 \text{ metres}}$$

$$\begin{aligned} 10) \text{ Income} &= 19 \times \text{£}22.50 + 41 \times \text{£}14.25 \\ &\approx 20 \times 20 + 40 \times 10 \\ &= 400 + 400 \\ &= \underline{\text{£}800} \end{aligned}$$

$$\begin{aligned} 11) (a) & 2x \text{ miles} \\ (b) & (7 - 3x) \text{ miles} \end{aligned}$$

$$\begin{aligned} 12) (a) 360^\circ \div 30 & \quad (b) 30 \times 9.5 \text{ cm} & 95 \\ &= 36 \div 3 &= 3 \times 95 \\ &= \underline{12^\circ} &= \underline{285 \text{ cm}} \\ & & \times 3 \\ & & \underline{285} \end{aligned}$$



$$14) 2x + 58 = 90$$

$$2x = 32$$

$$x = \underline{16^\circ}$$

