

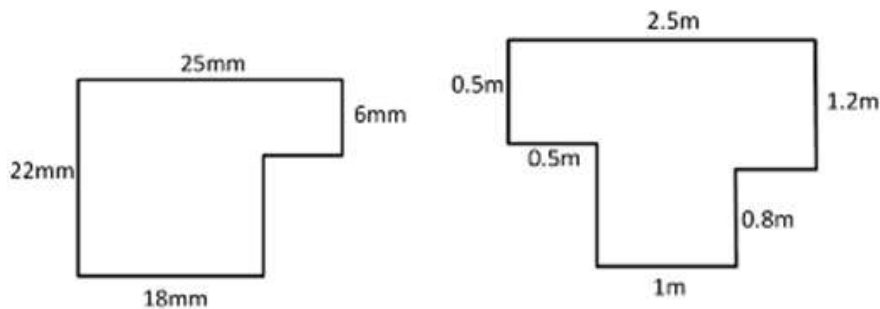
## S1 Core – Test 1 Revision

### 1. Coordinates

1. Draw a coordinate diagram with  $x$ - and  $y$ -axes numbered from  $-6$  to  $6$ .  
(a) Plot the points  $P(-5,-4)$ ,  $Q(1,-1)$ ,  $R(1,2)$  and  $S(-2,2)$ .  
(b) What name is given to the shape PQRS?
2. The points  $A(-3,2)$ ,  $B(-4,-2)$  and  $C(2,-1)$  are three vertices of parallelogram ABCD.  
Plot the points and draw the parallelogram on a coordinate diagram.
3. The points  $K(-2,1)$  and  $M(4,-1)$  are opposite vertices of square KLMN.  
Plot the points and draw the square on a coordinate diagram.

### 2. Perimeter

1. Work out the perimeter of each shape shown below.

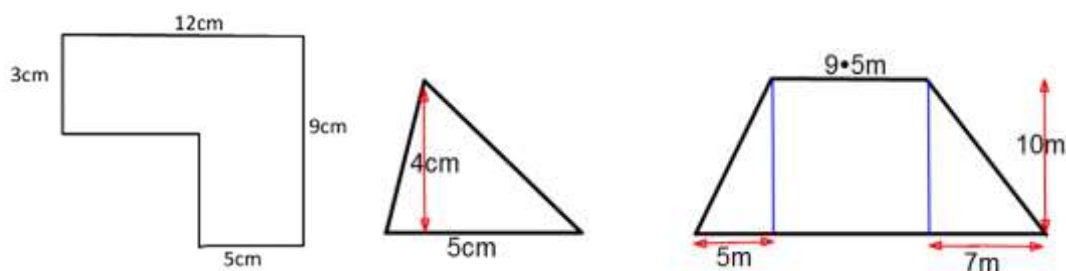


### 3. Expressions and Formulae

1. Write each of these expressions in simplest algebraic form.  
(a)  $m \times 5$       (b)  $8 \div n$       (c)  $a \times a$       (d)  $2p \times 3q$
2. Simplify :-  
(a)  $2a + 3b + 7a$       (b)  $8t + 2w - 3t$   
(c)  $5m + 7n - 3m + 2n$       (d)  $8p + 7q - p - 6q$
3. Substitute  $a = 2$ ,  $b = 3$ ,  $c = 6$  and  $d = 8$  into the following expressions and evaluate them.  
(a)  $5a + 1$       (b)  $20 - 4b$       (c)  $3d - 2b$       (d)  $cd$   
(e)  $5ab$       (f)  $\frac{d}{a}$       (g)  $\frac{ac}{b}$       (h)  $b^2$
4. Jim is a tyre fitter. His weekly pay is calculated using the formula:  
$$P = 6.5H + 0.75R$$
where  $P$  is his pay (in pounds),  $H$  is the hours he works, and  $R$  is the number of tyres he fits. One week he works 40 hours and fits 96 tyres. Calculate his pay for that week.

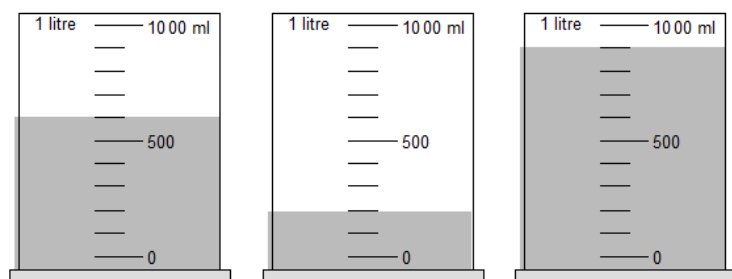
#### **4. Area**

1. Work out the area of the shapes shown below.



#### **5. Reading Scales**

1. Write down the volume shown on each of these scales.



### **ANSWERS**

#### **1. Coordinates**

1. (a) Ask your teacher to check your diagram. (b) Kite
2. Ask your teacher to check your diagram.
3. Ask your teacher to check your diagram.

#### **2. Perimeter**

1. 94mm; 4.5m

#### **3. Expressions and Formulae**

1. (a)  $5m$  (b)  $\frac{8}{n}$  (c)  $a^2$  (d)  $6pq$
2. (a)  $9a + 3b$  (b)  $5t + 2w$  (c)  $2m + 9n$  (d)  $7p + q$
3. (a) 11 (b) 8 (c) 18 (d) 48 (e) 30 (f) 4 (g) 4 (h) 9
4. £332

#### **4. Area**

1.  $66\text{cm}^2$ ;  $10\text{cm}^2$ ;  $215\text{m}^2$

#### **5. Reading Scales**

1. 600ml; 200ml; 900ml