

## S2 Prior – Test 1 Revision

### 1. Multiples

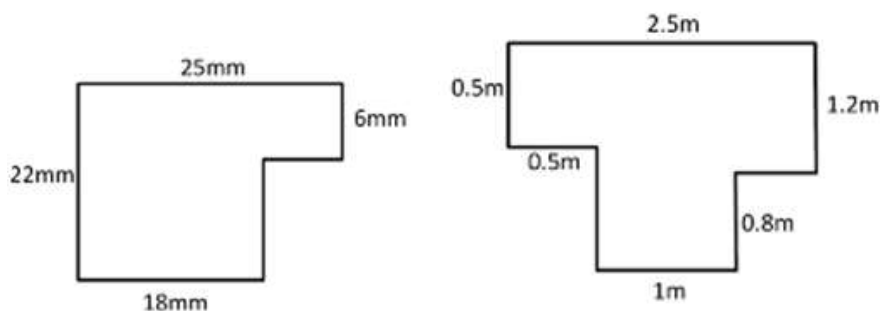
1. Find the lowest common multiple of :-  
(a) 8 and 10                      (b) 4, 6 and 9.

### 2. 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.

### 3. Perimeter

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

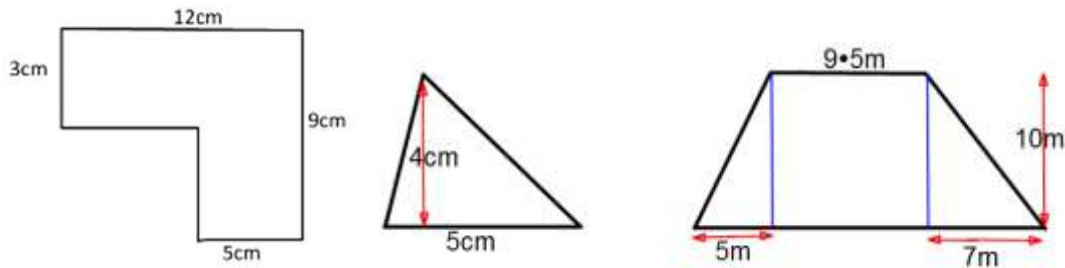


### 4. Time

1. Calculate the length of time between :-  
(a) 5.50am and 3.15pm                      (b) 2235 and 0620
2. What time is 5 hours 40 minutes after 1645?
3. What time is 3 hours 20 minutes before 1210?

## 5. Area

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



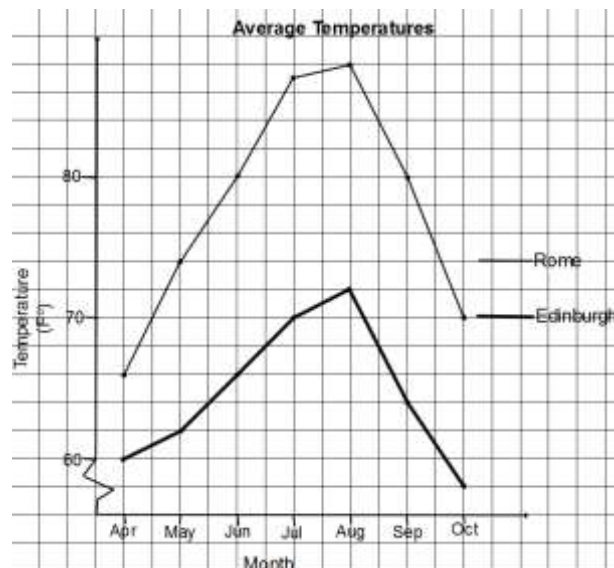
## 6. Information Handling

1. This table shows the number of boys and girls absent from school each day in one week.

| Day   | Mon | Tue | Wed | Thu | Fri |
|-------|-----|-----|-----|-----|-----|
| Boys  | 30  | 20  | 15  | 10  | 45  |
| Girls | 25  | 20  | 25  | 15  | 35  |

Draw a bar graph to show this information.

2. The graph shows average monthly temperatures in Edinburgh and Rome.



- (a) What is the temperature in Rome in May?
- (b) What is the temperature in Edinburgh in October?
- (c) How much warmer is Rome than Edinburgh in July?

3. The figures show Maths test marks for class 1A.

13 18 12 10 16 12 7 15  
 26 13 17 11 9 19 14 6  
 13 28 11 14 4 6 15 10

Copy and complete the frequency table to show these marks.

| Mark  | Tally marks | Frequency |
|-------|-------------|-----------|
| 0-4   |             |           |
| 5-9   |             |           |
| 10-14 |             |           |
| 15-19 |             |           |
| 20-24 |             |           |
| 25-29 |             |           |

4. This table shows the distances (in miles) between some Scottish towns and cities.

|              | Aberdeen | Dundee | Edinburgh | Fort William | Glasgow | Inverness | Oban | Perth | Stirling | Stranraer | Ullapool | Wick |
|--------------|----------|--------|-----------|--------------|---------|-----------|------|-------|----------|-----------|----------|------|
| Aberdeen     | 0        |        |           |              |         |           |      |       |          |           |          |      |
| Dundee       | 66       | 0      |           |              |         |           |      |       |          |           |          |      |
| Edinburgh    | 125      | 56     | 0         |              |         |           |      |       |          |           |          |      |
| Fort William | 156      | 117    | 135       | 0            |         |           |      |       |          |           |          |      |
| Glasgow      | 147      | 76     | 48        | 102          | 0       |           |      |       |          |           |          |      |
| Inverness    | 105      | 129    | 157       | 65           | 173     | 0         |      |       |          |           |          |      |
| Oban         | 182      | 120    | 122       | 45           | 97      | 109       | 0    |       |          |           |          |      |
| Perth        | 87       | 26     | 42        | 102          | 62      | 114       | 94   | 0     |          |           |          |      |
| Stirling     | 120      | 58     | 38        | 97           | 29      | 144       | 86   | 33    | 0        |           |          |      |
| Stranraer    | 232      | 102    | 133       | 188          | 86      | 258       | 173  | 146   | 114      | 0         |          |      |
| Ullapool     | 157      | 182    | 209       | 121          | 223     | 56        | 166  | 167   | 197      | 308       | 0        |      |
| Wick         | 208      | 229    | 260       | 167          | 276     | 105       | 213  | 216   | 245      | 361       | 121      | 0    |

- Write down the distance from (a) Perth to Inverness  
 (b) Edinburgh to Oban.

## ANSWERS

### 1. Multiples

1. (a) 40 (b) 36

### 2. 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

### 3. Perimeter

1. 94mm; 4.5m

2. (a)  $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$  (b)  $\begin{pmatrix} 2 \\ -4 \end{pmatrix}$  (c)  $\begin{pmatrix} -2 \\ -2 \end{pmatrix}$  (d)  $\begin{pmatrix} -3 \\ 2 \end{pmatrix}$

### 4. Time

1. (a) 9 hours 25 minutes (b) 7 hours 45 minutes  
2. 2225 3. 0850

### 5. Area

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

### 6. Information Handling

1. Ask your teacher to check your answer.  
2. (a)  $74^\circ\text{F}$  (b)  $58^\circ\text{F}$  (c)  $17^\circ\text{F}$   
3.

| Mark  | Tally marks | Frequency |
|-------|-------------|-----------|
| 0-4   |             | 1         |
| 5-9   |             | 4         |
| 10-14 |             | 11        |
| 15-19 |             | 6         |
| 20-24 |             | 0         |
| 25-29 |             | 2         |

4. (a) 114 miles (b) 122 miles