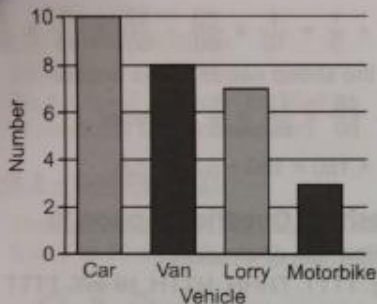


# Answers



(1 mark for both bars correct)

$$10 + 8 + 7 + 3 = 28$$

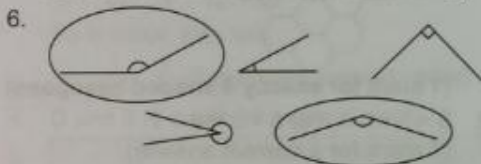
(1 mark for correct answer)

5.  $£3.40 \times 2 = £6.80$

$$10\% \text{ of } £6.80 = £6.80 \div 10 = 68\text{p}$$

$$20\% \text{ of } £6.80 = 68\text{p} \times 2 = £1.36$$

(2 marks for correct answer otherwise 1 mark for correct working)



(1 mark for both correct angles circled)

7.  $£1.12 \div 2 = 56\text{p}$

$$78\text{p} \times 3 = £2.34$$

$$56\text{p} + £2.34 = £2.90$$

(2 marks for correct answer otherwise 1 mark for correct working)

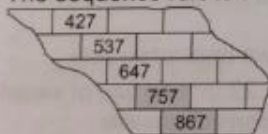
## Test 4 – pages 10-12

1. There are 325 ml of water left

$$500 - 325 = 175 \text{ ml}$$

(1 mark for correct answer)

2. The sequence rule is add 110 each time.



757 and 867

(1 mark for each correct answer)

3. Half a jar represents  $6 \div 2 = 3$  children  
 $6 \times 2 = 12$  children chose apricot  
 $(6 \times 3) + 3 = 21$  children chose strawberry  
 $21 - 12 = 9$  more children chose strawberry than apricot.

(1 mark for correct answer)

There are 10 jars in total, and 2

are apricot.  $\frac{2}{10} = \frac{1}{5} = 20\%$

(1 mark for correct answer)

4. If 100 ml needs 60 g fruit then 300 ml needs

$$60 \times 3 = 180 \text{ g fruit and 50 ml needs}$$

$$60 \div 2 = 30 \text{ g fruit. Total fruit needed}$$

$$\text{for 350 ml is } 180 \text{ g} + 30 \text{ g} = 210 \text{ g}$$

(2 marks for correct answer otherwise 1 mark for correct working)

5. 1.031, 1.06, 1.306, 1.36

(1 mark for correct order)

6.  $3 + 20 = 23$

$$9 - 5 = 4$$

(23, 4) (1 mark for correct answer)

7.  $13 + 17 + 22 + 20 + 18 = 90$

$$90 \div 5 = 18^\circ\text{C} \text{ (1 mark for correct answer)}$$

## Test 5 – pages 13-15

1.  $7 \times 2 = 9 + 5$

(1 mark for all three signs correct)

2. 1:50 pm (1 mark)

3.  $-7 + 12 = 5^\circ\text{C}$  (1 mark for correct answer)

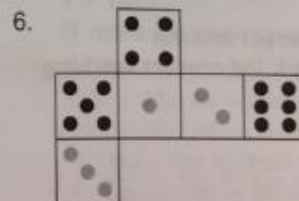
4.  $\frac{10.69}{7} 74.8^{\circ}3$  (1 mark for correct answer)

5.  $18 \div 3 = 6$

$$6 + 17 = 23$$

$$23 \times 2 = 46$$

$$46 - 25 = 21 \text{ (1 mark for correct answer)}$$



(1 mark for all three faces correct)

7.  $\text{MCMV} = 1000 + 900 + 5 = 1905$

(1 mark for the correct answer)

# Answers

8. Volume of cuboid A =  $3 \times 3 \times 3 = 27 \text{ cm}^3$   
 Volume of cuboid B =  $3 \times 4 \times 2 = 24 \text{ cm}^3$   
 So cuboid A has the greater volume  
**(2 marks for correct answer  
 otherwise 1 mark for correct working)**
9.  $2n + 3$  (1 mark)

## Arithmetic Test – pages 16-17

1.  $772 - 200 = 572$  (1 mark)
2.  $\frac{16}{6} = 2 \frac{4}{3}$  (1 mark)
3.  $88 - 20 \times 4 = 88 - 80 = 8$  (1 mark)
4.  $2 \times 8 = 16$   
 $\frac{3}{4} \times 8 = 6$   
 $16 + 6 = 22$  (1 mark)
5.  $\begin{array}{r} 13.70 \\ + 8.92 \\ \hline 22.62 \end{array}$   
 (1 mark)
6.  $\frac{5}{12} + \frac{1}{6} = \frac{5}{12} + \frac{2}{12} = \frac{7}{12}$  (1 mark)

7.  $\begin{array}{r} 583 \\ \times 28 \\ \hline 4664 \\ 11660 \\ \hline 16324 \end{array}$   
**(2 marks for correct answer  
 otherwise 1 mark for correct working)**

8.  $\begin{array}{r} 43 \\ 15 \overline{)645} \\ \underline{-60} \\ 45 \\ \underline{-45} \\ 0 \end{array}$   
**(2 marks for correct answer  
 otherwise 1 mark for correct working)**

## Puzzle – page 18

$\frac{2}{3} + \frac{1}{4} + \frac{1}{12} = \frac{40}{60} + \frac{15}{60} + \frac{5}{60} = 1$ ,  
 so these three fractions should be joined.

$\frac{1}{2} + \frac{1}{5} + \frac{1}{10} = \frac{30}{60} + \frac{12}{60} + \frac{6}{60} = \frac{48}{60}$ ,  
 so the sheep needs to knit another  
 $1 - \frac{48}{60} = \frac{12}{60} = \frac{1}{5}$  of a scarf.  
 $\frac{1}{5} \times 150 = 150 \div 5 = 30 \text{ cm}$

## Scoresheet Question – page 19

A minimum of 4 moves.  
 E.g. TTTT, THHH, HTTH, HHHT, TTTT

## Set B

### Test 1 – pages 20-22

1. E.g.



**(1 mark for exactly 4 shaded hexagons)**

2.  $5 \times 3 = 7 + 8$  or  $5 \times 3 = 8 + 7$   
**(1 mark for a correct answer)**
3.  $\begin{array}{r} 7.561 \\ - 2.370 \\ \hline 5.191 \end{array}$   
**(1 mark for correct answer)**
4. Area =  $\frac{1}{2} \times \text{base} \times \text{height}$   
 $= \frac{1}{2} \times 8 \times 10 = 40 \text{ m}^2$  (1 mark)
5. Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24  
 Factors of 40: 1, 2, 4, 5, 8, 10, 20, 40  
 So 1, 2, 4 and 8 should be circled  
**(1 mark for all 4 circled)**
6.  $\begin{array}{r} 3.68 \\ - 1.24 \\ \hline \underline{2.44} \end{array}$  for two bags of sweets  
 $\pounds 2.44 \div 2 = \pounds 1.22$  for one bag of sweets  
**(2 marks for correct answer  
 otherwise 1 mark for the correct  
 cost of two bags of sweets)**
7. 5 (1 mark)  
 11 (1 mark)

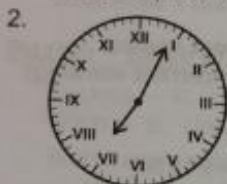
$$\frac{6}{60} = \frac{48}{60}$$

# Answers

- 1.75 l = 1750 ml  
 250 ml × 4 = 1000 ml  
 250 ml × 3 = 750 ml  
 So 4 + 3 = 7 cups can be filled  
 (1 mark for correct answer)

## Test 2 – pages 23-25

1. The rule is 'multiply the previous term by 2'  
 6 and 96 (1 mark for both correct)



(1 mark for correct answer)

3. Change each fraction into twelfths:

$$\frac{1}{2} = \frac{6}{12}, \frac{3}{4} = \frac{9}{12}, \frac{7}{12}$$

So in order, they are:

$$\frac{1}{2}, \frac{7}{12}, \frac{3}{4} \text{ (1 mark for correct order)}$$

4. D and E (1 mark for both correct)

5.

×	20	30	40	50
4	80	120	160	200
5	100	150	200	250
7	140	210	280	350

(1 mark for all three correct)

6.  $4.5 \text{ m} \times 6 = 27 \text{ m}$   
 $27 \times 100 = 2700 \text{ cm}$   
 $2700 + 75 = 2775 \text{ cm}$   
 (2 marks for correct answer  
 otherwise 1 mark for correct working)

7. 10.1, 10.2 or 10.3  
 (1 mark for a correct answer)

8.  $4Y + Z = 14$   
 Possible values are:  
 $Y = 1, Z = 10$   
 $Y = 2, Z = 6$   
 $Y = 3, Z = 2$

(2 marks for all three correct pairs,  
 otherwise 1 mark for two correct pairs)

## Test 3 – pages 26-28

1. 87

$$\begin{array}{r} \times 7 \\ 609 \end{array}$$

(1 mark for correct answer)

2. 2458 (1 mark)

3.  $12 - 3 - 4 = 5$  toffees left

$$\frac{5}{12} \text{ are left (1 mark for correct answer)}$$

4.

Shape	Name of Shape	Number of right angles	Lines of symmetry
A	rectangle	4	2
B	triangle	1	0
C	pentagon	0	5

(1 mark for all three correct)

5.

Month	Number of books not returned	Total
April	III III III	13
May	III III III III II	22
June	III III IIII	14
July	III III I	11

(1 mark for table filled in correctly)

$$13 + 22 + 14 + 11 = 60$$

$$60 + 4 = 15 \text{ books}$$

(1 mark for correct answer)

6.  $X + 50^\circ + 80^\circ + 90^\circ = 360^\circ$

$$X = 360^\circ - 220^\circ = 140^\circ$$

$$Y + 50^\circ + 30^\circ = 180^\circ$$

$$Y = 180^\circ - 80^\circ = 100^\circ$$

(1 mark for each correct angle)

7.  $100\% - 15\% - 5\% = 80\%$

$$10\% \text{ of } 300 \text{ ml} = 300 \text{ ml} \div 10 = 30 \text{ ml}$$

$$80\% \text{ of } 300 \text{ ml} = 30 \text{ ml} \times 8 = 240 \text{ ml}$$

(2 marks for correct answer

otherwise 1 mark for correct working)

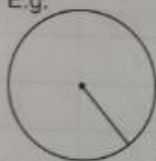


# Answers

2  
16 | 34

## Test 4 – pages 29-31

- $\frac{2}{5} = \frac{4}{10}$  and  $\frac{16}{72} = \frac{2}{9}$   
(1 mark for both correct answers)
- $\frac{£1.36}{6} = 8.1\bar{6}$  (1 mark for correct answer)
- $9 \times 6 > 52$   
 $2 - 7 < -3$  (1 mark for both signs correct)
- $37 - 8 = 29$  cm (1 mark for correct answer)  
 $100 - 29 = 71$  cm  
(1 mark for correct answer)
- E.g.



(1 mark for a correct radius)

Diameter =  $2 \times$  radius =  $2 \times 17 = 34$  mm  
(1 mark)

- Height at age 11 = 135 cm  
Height at age 12 = 150 cm  
 $150 - 135 = 15$  cm = 0.15 m  
(1 mark for correct answer)
- Box A:  
 $£2.52 \div 12 = £0.21 = 21$  p per fish finger  
Box B:  
 $£3.80 \div 20 = £0.19 = 19$  p per fish finger  
So box B is better value for money.  
(2 marks for correct answer,  
otherwise 1 mark for correct working)

## Test 5 – pages 32-34

- 48p, £0.84, 408p, £4.80  
(1 mark for all four values  
in the correct order)
- The triangle is isosceles, so the missing side of the triangle is 7 m. The missing side of the rectangle is 8 m.  
Perimeter =  $8 + 7 + 7 + 8 + 6 = 36$  m  
(1 mark for correct answer)
- Multiples of 6 are ..., 36, 42, 48, ...  
42 is the only one between 40 and 45,  
so  $6p = 42$  which means  $p = 7$ .  
(1 mark for correct answer)

- $0.236 \times 1000 = 236$  g  
(1 mark for correct answer)

$$\begin{array}{r} 12r1 \\ 16 \overline{) 193} \end{array}$$

So 193 ounces = 12 lb 1 oz  
(1 mark for correct answer)

- $3\frac{1}{4} + \frac{7}{2} = \frac{13}{4} + \frac{7}{2} = \frac{13}{4} + \frac{14}{4} = \frac{27}{4}$   
 $= 6\frac{3}{4}$  miles

(2 marks for the correct answer  
otherwise 1 mark for correct working)

- Josh = £12  
Kate = £12 - £3 = £9  
Padma = £9 + £2.50 = £11.50  
Total = £12 + £9 + £11.50 = £32.50  
(2 marks for correct answer  
otherwise 1 mark for correct working)
- To get from (8, 14) to (16, 10), add 8 to the x-coordinate and subtract 4 from the y-coordinate.  
So B(6, 7) becomes  
 $B'(6 + 8, 7 - 4) = (14, 3)$   
(1 mark for both coordinates correct)

## Arithmetic Test – pages 35-36

- $11\,285 + 1000 = 12\,285$  (1 mark)
- $\frac{1}{5} \div 6 = \frac{1}{5 \times 6} = \frac{1}{30}$  (1 mark)
- $2.1 \times 5 = 2 \times 5 + 0.1 \times 5$   
 $= 10 + 0.5 = 10.5$  (1 mark)
- $4 \times 5 - 27 + 3 = 20 - 9 = 11$  (1 mark)
- $\frac{13}{12} - \frac{2}{3} = \frac{13}{12} - \frac{8}{12} = \frac{5}{12}$  (1 mark)
- $\frac{1}{5}$  of 45 =  $45 \div 5 = 9$   
 $\frac{3}{5}$  of 45 =  $9 \times 3 = 27$  (1 mark)

$$\begin{array}{r} 3245 \\ \times 23 \\ \hline 9735 \\ 64900 \\ \hline 74635 \end{array}$$

(2 marks for correct answer  
otherwise 1 mark for correct working)

# Answers

$$\begin{array}{r} 214 \\ 16 \overline{)3424} \\ \underline{-32} \phantom{0} \\ 22 \phantom{0} \\ \underline{-16} \phantom{0} \\ 64 \phantom{0} \\ \underline{-64} \\ 0 \end{array}$$

(2 marks for correct answer otherwise 1 mark for correct working)

## Puzzle – page 37

Cyclops — B, Lion — A, Dragon — C, Witch — E, Unicorn — D

So Horace's unicorn is at exit D.

## Scoresheet Question – page 38

Largest area =  $12 \text{ m} \times 12 \text{ m} = 144 \text{ m}^2$   
(Square pen with sides of length 12 m.)

## Set C

### Test 1 – pages 39-41

1. Smallest: 344

Largest: 654

(1 mark for both correct)

2.  $\frac{27}{3} \overline{)821}$  (1 mark for correct answer)

Fraction	Decimal	Percentage
$\frac{63}{100}$	0.63	63%
$\frac{23}{50}$	0.46	46%

(2 marks for both rows filled in correctly, otherwise 1 mark for one row filled in correctly)

4.  $1p + 2p + 5p + 10p + 20p = 38p$   
(1 mark for correct answer)

5.  $2 = \frac{12}{6}$ , so  $2\frac{1}{6} = \frac{12}{6} + \frac{1}{6} = \frac{13}{6}$   
(1 mark for correct answer)

6. Action:  $19 - 18 = 1$

Horror:  $31 - 14 = 17$

Comedy:  $27 - 12 = 15$

Romance:  $29 - 13 = 16$

The biggest difference is in horror films.

(1 mark for correct answer)

7.  $68 + 77 = 145$

$11 \times 12 = 132$  (1 mark for both correct)

8. 08:30 to 09:00 = 30 minutes

09:00 to 09:25 = 25 minutes

$30 + 25 = 55$  minutes

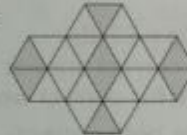
(1 mark for correct answer)

09:15 = 9.15 am

(1 mark for correct answer)

## Test 2 – pages 42-44

1. E.g.



(1 mark for shading any two extra triangles)

2. 367 rounded to the nearest 100 is 400

1.26 rounded to 1 decimal place is 1.3

(1 mark for both correct)

3.  $4 + 8 > 3 + 6$       $6 - 3 < 8 - 4$

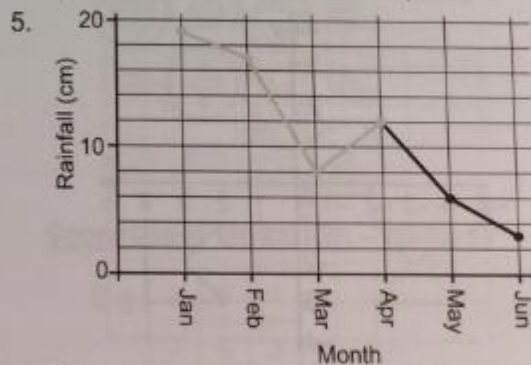
$3 \times 6 < 4 \times 8$       $8 + 4 = 6 + 3$

(2 marks for all four signs correct otherwise 1 mark for two signs correct)

4. (1 mark for triangle drawn accurately)

5.1 cm, 5.2 cm or 5.3 cm

(1 mark for a correct answer)



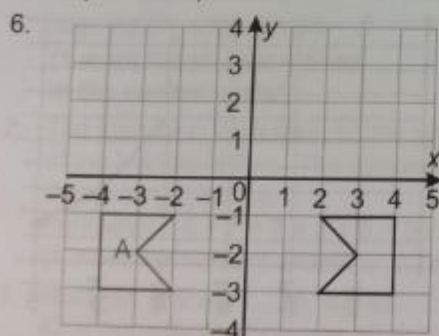
(1 mark for both points and lines correct)

# Answers

6. 4 shares = 24 grapes,  
so 1 share =  $24 \div 4 = 6$  grapes  
Felix gets 5 shares =  $5 \times 6 = 30$  grapes  
**(1 mark for correct answer)**
7. Felix spends  $\text{£}3.45 \times 3 = \text{£}10.35$   
Anita spends  $\text{£}4.80 \times 2 = \text{£}9.60$   
 $\text{£}10.35 - \text{£}9.60 = \text{£}0.75$   
**(2 marks for correct answer  
otherwise 1 mark for correct working)**

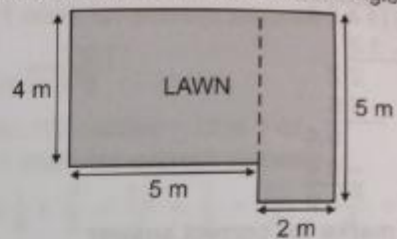
## Test 3 – pages 45-47

1. Difference =  $0.9 - 0.5 = 0.4$   
Next two terms:  
 $1.3 + 0.4 = 1.7$   
 $1.7 + 0.4 = 2.1$  **(1 mark for both correct)**
2.  $46p + 2 = 23p$   
 $72p \times 3 = 216p$   
 $23p + 216p = 239p = \text{£}2.39$   
**(2 marks for the correct answer  
otherwise 1 mark for correct working)**
3. 13, 41 **(1 mark for both correct)**
4. 2.15 **(1 mark)**
5. Cricket bats = 30  
Cricket balls = 25  
 $30 - 25 = 5$  **(1 mark for correct answer)**  
NO  
E.g.  
There were  $25 + 45 + 15 + 25 + 30 + 25$   
 $= 165$  items sold in total, and  $25 + 45 = 70$   
of those items were for table tennis. 70 is  
less than half of 165, so Zac is not correct.  
**(1 mark for correct answer with suitable  
explanation)**



**(1 mark)**

7. Split the shape up into two rectangles:



$$5 \times 4 = 20 \text{ m}^2$$

$$2 \times 5 = 10 \text{ m}^2$$

$$20 + 10 = 30 \text{ m}^2$$

**(2 marks for correct answer  
otherwise 1 mark for correct working)**

## Test 4 – pages 48-50

1.  $9^\circ\text{C}$  **(1 mark)**
2.  $\text{£}2.50 \div 2 = \text{£}1.25$   
 $\text{£}1.25 - 72p = 125p - 72p = 53p$   
**(1 mark for correct answer)**
3.  $29^\circ$  **(1 mark)**
4. Its opposite angles are equal — true ( $\checkmark$ )  
It is called a parallelogram — true ( $\checkmark$ )  
It has four lines of symmetry — false ( $\times$ )  
**(1 mark for all three statements correct)**  
Area of a parallelogram = base  $\times$  height  
 $= 5 \times 2 = 10 \text{ cm}^2$  **(1 mark)**
5.  $6 \times 2 = 12$  tubes for  $8 \times 2 = 16$  aeroplanes  
 $6 + 2 = 3$  tubes for  $8 + 2 = 4$  aeroplanes  
so for  $16 + 4 = 20$  aeroplanes,  
Felix needs  $12 + 3 = 15$  tubes of glue.  
**(1 mark for correct answer)**
6.  $1560 + 2440 = 4000 \text{ m} = 4 \text{ km}$   
**(1 mark for correct answer)**  
 $5 \text{ miles} \approx 8 \text{ km}$ , so  $4 \text{ km} \approx 5 + 2 = 2.5 \text{ miles}$   
**(1 mark for correct answer)**
7.  $\frac{1}{5}$  of 30 =  $30 \div 5 = 6$ , so  $\frac{2}{5}$  of 30 =  $6 \times 2 = 12$   
 $\frac{1}{10}$  of 30 =  $30 \div 10 = 3$ ,  
so  $\frac{3}{10}$  of 30 =  $3 \times 3 = 9$   
 $12 + 9 = 21$  bottles sold in total,  
so there are  $30 - 21 = 9$  bottles left.  
**(2 marks for correct answer  
otherwise 1 mark for correct working)**



# Answers

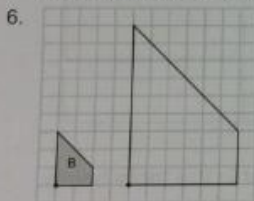
## Test 5 – pages 51-53

- $750 - 736 = 14$   
 $766 - 750 = 16$   
 So 736 is closer to 750  
 (1 mark for correct answer)
- B and E (1 mark for both correct)
- Multiples of 8: 8, 16, 24, 32, 40, 48  
 Multiples of 12: 12, 24, 36, 48  
 So common multiples are 24 and 48  
 (1 mark for both correct multiples)
- $25\% \text{ of } £280 = £280 \div 4 = £70$   
 So  $75\% \text{ of } £280 = £70 \times 3 = £210$   
 (1 mark for correct answer)

- $$\begin{array}{r} 22 \\ 200 \overline{) 4500} \\ \underline{400} \phantom{0} \\ 500 \\ \underline{400} \phantom{0} \\ 1000 \\ \underline{800} \phantom{0} \\ 2000 \\ \underline{1600} \phantom{0} \\ 4000 \\ \underline{3800} \phantom{0} \\ 2000 \\ \underline{1600} \phantom{0} \\ 4000 \\ \underline{3800} \phantom{0} \\ 2000 \end{array}$$
 So the school will need to buy 23 boxes of paperclips. (1 mark for correct answer)

$$\begin{array}{r} 2.70 \\ \times 8 \\ \hline £ 21.60 \end{array}$$

(1 mark for correct answer)



(1 mark)

- $6 + 5 + 4 = 15$  (1 mark for correct answer)  
 E.g. The graph shows that 8 children took between 6 and 8 minutes to walk to school, but Zac cannot tell how many of them took 6-7 minutes as the data is grouped. (1 mark for suitable explanation)
- $6^2 + (3 \times 6) = 36 + 18 = 54$   
 (1 mark for correct answer)

## Arithmetic Test – pages 54-55

- $5943 + 100 = 6043$  (1 mark)
- $15.8 - 12 = 3.8$  (1 mark)

- $2^3 = 8$  (1 mark)

$$4. \quad \begin{array}{r} 24 \\ 16 \overline{) 384} \end{array}$$

So  $38.4 \div 16 = 24 \div 10 = 2.4$  (1 mark)

- $10\% \text{ of } 640 = 640 \div 10 = 64$   
 $5\% \text{ of } 640 = 64 \div 2 = 32$   
 $15\% \text{ of } 640 = 64 + 32 = 96$  (1 mark)

- $1\frac{1}{5} - \frac{11}{10} = \frac{6}{5} - \frac{11}{10} = \frac{12}{10} - \frac{11}{10} = \frac{1}{10}$   
 (1 mark)

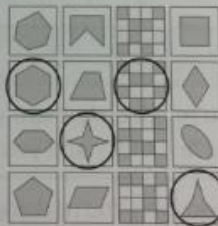
$$7. \quad \begin{array}{r} 2962 \\ \times 47 \\ \hline 20734 \\ 118480 \\ \hline 139214 \end{array}$$

(2 marks for correct answer otherwise 1 mark for correct working)

$$8. \quad \begin{array}{r} 231 \\ 24 \overline{) 5544} \\ \underline{48} \phantom{00} \\ 74 \phantom{0} \\ \underline{72} \phantom{0} \\ 24 \phantom{0} \\ \underline{24} \phantom{0} \\ 0 \end{array}$$

(2 marks for correct answer otherwise 1 mark for correct working)

## Puzzle – page 56



## Scoresheet Question – page 57

E.g.

2	9	4
7	5	3
6	1	8