BROAD HORIZON
TUITION CENTRE

11+ Tuition – Year 4

Week 41

Revision Lesson

ANSWERS

Maths

Fractions of Numbers

1) $\frac{1}{9}$ of 369 = **41**

2) $\frac{1}{2}$ of 154 = **77**

3) $\frac{1}{6}$ of 348 = **58**

4) $\frac{1}{7}$ of 658 = **94**

5) $\frac{1}{7}$ of 392 = **56**

6) $\frac{1}{2}$ of 62 = **31**

7) $\frac{1}{9}$ of 405 = **45**

8) $\frac{1}{8}$ of 456 = **57**

9) $\frac{1}{7}$ of 350 = **50**

10) $\frac{1}{3}$ of 123 = **41**

11) $\frac{1}{3}$ of 243 = **81**

12) $\frac{1}{8}$ of 136 = **17**

13) $\frac{1}{12}$ of 384 = **32**

14) $\frac{1}{9}$ of 108 = **12**

15) $\frac{1}{11}$ of 891 = **81**

16) $\frac{1}{10}$ of 1000 = **100**

17) $\frac{1}{3}$ of 198 = **66**

18) $\frac{1}{6}$ of 252 = **42**

19) $\frac{1}{12}$ of 324 = **27**

20) $\frac{1}{8}$ of 728 = **91**

21) $\frac{1}{4}$ of 24 = **6**

22) $\frac{1}{9}$ of 513 = **57**

23) $\frac{1}{12}$ of 480 = **40**

24) $\frac{1}{6}$ of 438 = **73**

25) $\frac{1}{5}$ of 480 = **96**

26) $\frac{1}{4}$ of 184 = **46**

27) $\frac{1}{9}$ of 288 = **32**

28) $\frac{1}{7}$ of 42 = **6**

29) $\frac{1}{3}$ of 201 = **67**

30) $\frac{1}{7}$ of 511 = **73**

1. £280

2. 100 sweets

3. $\frac{4}{15}$ of the $900

4. 247.5 kg

5. 34 years

6. 8 weeks

Add and Subtract Fractions

1) $\frac{1}{3} + \frac{2}{5} = \frac{5}{15} + \frac{6}{15} = \frac{11}{15}$

2) $\frac{4}{5} + \frac{1}{2} = \frac{8}{10} + \frac{5}{10} = \frac{13}{10} = 1\frac{3}{10}$

3) $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

4) $\frac{2}{3} + \frac{1}{2} = \frac{4}{6} + \frac{3}{6} = \frac{7}{6} = 1\frac{1}{6}$

5) $\frac{5}{10} + \frac{3}{5} = \frac{5}{10} + \frac{6}{10} = \frac{11}{10} = 1\frac{1}{10}$

6) $\frac{1}{2} + \frac{1}{3} = \frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

7) $\frac{1}{4} + \frac{1}{3} = \frac{3}{12} + \frac{4}{12} = \frac{7}{12}$

8) $\frac{9}{10} + \frac{1}{2} = \frac{9}{10} + \frac{5}{10} = \frac{14}{10} = \frac{7}{5} = 1\frac{2}{5}$

9) $\frac{2}{3} + \frac{1}{2} = \frac{4}{6} + \frac{3}{6} = \frac{7}{6} = 1\frac{1}{6}$

10) $\frac{1}{3} + \frac{3}{5} = \frac{5}{15} + \frac{9}{15} = \frac{14}{15}$

1) $\frac{1}{2} - \frac{1}{5} = \frac{5}{10} - \frac{2}{10} = \frac{3}{10}$

2) $\frac{2}{3} - \frac{3}{5} = \frac{10}{15} - \frac{9}{15} = \frac{1}{15}$

3) $\frac{8}{10} - \frac{1}{5} = \frac{8}{10} - \frac{2}{10} = \frac{6}{10} = \frac{3}{5}$

4) $\frac{1}{3} - \frac{1}{4} = \frac{4}{12} - \frac{3}{12} = \frac{1}{12}$

5) $\frac{2}{3} - \frac{1}{4} = \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$

6) $\frac{3}{5} - \frac{1}{2} = \frac{6}{10} - \frac{5}{10} = \frac{1}{10}$

7) $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$

8) $\frac{4}{5} - \frac{1}{2} = \frac{8}{10} - \frac{5}{10} = \frac{3}{10}$

9) $\frac{2}{4} - \frac{3}{10} = \frac{10}{20} - \frac{6}{20} = \frac{4}{20} = \frac{1}{5}$

10) $\frac{2}{4} - \frac{1}{2} = \frac{2}{4} - \frac{2}{4} = 0$

1) $4\frac{1}{3} + 8\frac{4}{5} = 4\frac{5}{15} + 8\frac{12}{15} = 12\frac{17}{15} = 13\frac{2}{15}$

2) $2\frac{3}{10} + 8\frac{3}{4} = 2\frac{6}{20} + 8\frac{15}{20} = 10\frac{21}{20} = 11\frac{1}{20}$

3) $3\frac{1}{2} + 8\frac{2}{3} = 3\frac{3}{6} + 8\frac{4}{6} = 11\frac{7}{6} = 12\frac{1}{6}$

4) $4\frac{1}{4} + 6\frac{1}{2} = 4\frac{1}{4} + 6\frac{2}{4} = 10\frac{3}{4}$

5) $4\frac{1}{3} + 7\frac{1}{2} = 4\frac{2}{6} + 7\frac{3}{6} = 11\frac{5}{6}$

6) $6\frac{3}{5} + 4\frac{1}{2} = 6\frac{6}{10} + 4\frac{5}{10} = 10\frac{11}{10} = 11\frac{1}{10}$

7) $4\frac{2}{4} + 7\frac{4}{10} = 4\frac{10}{20} + 7\frac{8}{20} = 11\frac{18}{20} = 11\frac{9}{10}$

8) $6\frac{6}{10} + 5\frac{2}{3} = 6\frac{18}{30} + 5\frac{20}{30} = 11\frac{38}{30} = 12\frac{4}{15}$

9) $1\frac{3}{10} + 6\frac{1}{2} = 1\frac{3}{10} + 6\frac{5}{10} = 7\frac{8}{10} = 7\frac{4}{5}$

10) $6\frac{7}{10} + 9\frac{3}{4} = 6\frac{14}{20} + 9\frac{15}{20} = 15\frac{29}{20} = 16\frac{9}{20}$

1) $\frac{1}{3}+\frac{4}{10}+\frac{1}{5}=\frac{10}{30}+\frac{12}{30}+\frac{6}{30}=\frac{28}{30}=\frac{14}{15}$

2) $\frac{8}{10}+\frac{1}{4}+\frac{1}{5}=\frac{16}{20}+\frac{5}{20}+\frac{4}{20}=\frac{25}{20}=\frac{5}{4}=1\frac{1}{4}$

3) $\frac{3}{4}+\frac{1}{5}+\frac{1}{2}=\frac{15}{20}+\frac{4}{20}+\frac{10}{20}=\frac{29}{20}=1\frac{9}{20}$

4) $\frac{1}{3}+\frac{1}{2}+\frac{1}{4}=\frac{4}{12}+\frac{6}{12}+\frac{3}{12}=\frac{13}{12}=1\frac{1}{12}$

5) $\frac{5}{10}+\frac{1}{3}+\frac{1}{2}=\frac{15}{30}+\frac{10}{30}+\frac{15}{30}=\frac{40}{30}=\frac{4}{3}=1\frac{1}{3}$

6) $\frac{9}{10}+\frac{1}{4}+\frac{1}{2}=\frac{18}{20}+\frac{5}{20}+\frac{10}{20}=\frac{33}{20}=1\frac{13}{20}$

7) $\frac{1}{3}+\frac{4}{5}+\frac{1}{2}=\frac{10}{30}+\frac{24}{30}+\frac{15}{30}=\frac{49}{30}=1\frac{19}{30}$

8) $\frac{1}{3}+\frac{1}{2}+\frac{1}{4}=\frac{4}{12}+\frac{6}{12}+\frac{3}{12}=\frac{13}{12}=1\frac{1}{12}$

9) $\frac{1}{10}+\frac{1}{5}+\frac{1}{4}=\frac{2}{20}+\frac{4}{20}+\frac{5}{20}=\frac{11}{20}$

10) $\frac{2}{4}+\frac{1}{2}+\frac{1}{5}=\frac{10}{20}+\frac{10}{20}+\frac{4}{20}=\frac{24}{20}=\frac{6}{5}=1\frac{1}{5}$

1. $3\frac{7}{8}$
2. $3\frac{7}{8}$
3. $\frac{5}{10}$ or $\frac{1}{2}$
4. $\frac{3}{12}$ or $\frac{1}{3}$
5. Grace $\frac{1}{3}$
6. $\frac{1}{2}$ km
7. $4\frac{1}{10}$ bottles
8. $\frac{5}{8}$ of a mile
9. $\frac{4}{10}$
10. $\frac{7}{8}$
11. $1\frac{5}{8}$ pizzas
12. $\frac{1}{2}$

FDP

Percentage to Decimal

Convert Percent to Decimal

46 % = 0.46	141 % = 1.41	143 % = 1.43
32 % = 0.32	21 % = 0.21	44 % = 0.44
91 % = 0.91	39 % = 0.39	6 % = 0.06
168 % = 1.68	113 % = 1.13	162 % = 1.62
23 % = 0.23	44 % = 0.44	165 % = 1.65
168 % = 1.68	161 % = 1.61	126 % = 1.26
20 % = 0.2	158 % = 1.58	85 % = 0.85
181 % = 1.81	181 % = 1.81	56 % = 0.56
75 % = 0.75	82 % = 0.82	57 % = 0.57
175 % = 1.75	154 % = 1.54	70 % = 0.7

Percentage to Fraction

Convert Percent to Fraction

34 % = $\frac{34}{100} = \frac{17}{50}$

44 % = $\frac{44}{100} = \frac{11}{25}$

45 % = $\frac{45}{100} = \frac{9}{20}$

184 % = $\frac{184}{100} = \frac{46}{25}$

89 % = $\frac{89}{100}$

119 % = $\frac{119}{100}$

22 % = $\frac{22}{100} = \frac{11}{50}$

112 % = $\frac{112}{100} = \frac{28}{25}$

58 % = $\frac{58}{100} = \frac{29}{50}$

106 % = $\frac{106}{100} = \frac{53}{50}$

166 % = $\frac{166}{100} = \frac{83}{50}$

135 % = $\frac{135}{100} = \frac{27}{20}$

76 % = $\frac{76}{100} = \frac{19}{25}$

72 % = $\frac{72}{100} = \frac{18}{25}$

137 % = $\frac{137}{100}$

167 % = $\frac{167}{100}$

127 % = $\frac{127}{100}$

73 % = $\frac{73}{100}$

71 % = $\frac{71}{100}$

45 % = $\frac{45}{100} = \frac{9}{20}$

47 % = $\frac{47}{100}$

29 % = $\frac{29}{100}$

32 % = $\frac{32}{100} = \frac{8}{25}$

23 % = $\frac{23}{100}$

36 % = $\frac{36}{100} = \frac{9}{25}$

150 % = $\frac{150}{100} = \frac{3}{2}$

37 % = $\frac{37}{100}$

63 % = $\frac{63}{100}$

159 % = $\frac{159}{100}$

120 % = $\frac{120}{100} = \frac{6}{5}$

Working out space:

Decimal to Fraction

Convert Decimal to Fraction

$1.18 = \frac{118}{100} = \frac{59}{50}$	$1.73 = \frac{173}{100}$	$0.65 = \frac{65}{100} = \frac{13}{20}$
$0.84 = \frac{84}{100} = \frac{21}{25}$	$0.06 = \frac{6}{100} = \frac{3}{50}$	$1.29 = \frac{129}{100}$
$1.12 = \frac{112}{100} = \frac{28}{25}$	$1.74 = \frac{174}{100} = \frac{87}{50}$	$0.19 = \frac{19}{100}$
$1.1 = \frac{11}{10}$	$1.05 = \frac{105}{100} = \frac{21}{20}$	$0.29 = \frac{29}{100}$
$1.72 = \frac{172}{100} = \frac{43}{25}$	$0.15 = \frac{15}{100} = \frac{3}{20}$	$0.51 = \frac{51}{100}$
$0.46 = \frac{46}{100} = \frac{23}{50}$	$1.54 = \frac{154}{100} = \frac{77}{50}$	$0.16 = \frac{16}{100} = \frac{4}{25}$
$1.1 = \frac{11}{10}$	$1.82 = \frac{182}{100} = \frac{91}{50}$	$1.33 = \frac{133}{100}$
$0.61 = \frac{61}{100}$	$1.5 = \frac{15}{10} = \frac{3}{2}$	$1.75 = \frac{175}{100} = \frac{7}{4}$
$0.41 = \frac{41}{100}$	$0.81 = \frac{81}{100}$	$1.62 = \frac{162}{100} = \frac{81}{50}$
$1.57 = \frac{157}{100}$	$0.06 = \frac{6}{100} = \frac{3}{50}$	$1.27 = \frac{127}{100}$

Working out space:

Decimal to Percentage

Convert Decimal to Percent

0.53 = 53 %	0.5 = 50 %	1.89 = 189 %
0.21 = 21 %	1.1 = 110 %	0.4 = 40 %
0.07 = 7 %	0.86 = 86 %	0.68 = 68 %
1.77 = 177 %	0.85 = 85 %	0.28 = 28 %
1.21 = 121 %	1.2 = 120 %	0.66 = 66 %
0.36 = 36 %	1.45 = 145 %	1.77 = 177 %
1.91 = 191 %	0.52 = 52 %	1.38 = 138 %
1.55 = 155 %	1.84 = 184 %	1.76 = 176 %
0.54 = 54 %	1.42 = 142 %	1.47 = 147 %
0.42 = 42 %	0.26 = 26 %	1.25 = 125 %

Working out space:

Fraction to Decimal

Convert Fraction to Decimal

$\frac{96}{50} = 1.92$	$\frac{11}{50} = 0.22$	$\frac{87}{50} = 1.74$
$\frac{40}{50} = 0.8$	$\frac{2}{25} = 0.08$	$\frac{6}{10} = 0.6$
$\frac{5}{20} = 0.25$	$\frac{18}{25} = 0.72$	$\frac{48}{25} = 1.92$
$\frac{1}{25} = 0.04$	$\frac{5}{10} = 0.5$	$\frac{37}{25} = 1.48$
$\frac{39}{20} = 1.95$	$\frac{6}{20} = 0.3$	$\frac{96}{50} = 1.92$
$\frac{11}{10} = 1.1$	$\frac{12}{10} = 1.2$	$\frac{19}{25} = 0.76$
$\frac{13}{20} = 0.65$	$\frac{6}{50} = 0.12$	$\frac{12}{10} = 1.2$
$\frac{1}{25} = 0.04$	$\frac{43}{25} = 1.72$	$\frac{5}{20} = 0.25$
$\frac{29}{50} = 0.58$	$\frac{1}{10} = 0.1$	$\frac{16}{10} = 1.6$
$\frac{11}{25} = 0.44$	$\frac{9}{25} = 0.36$	$\frac{15}{20} = 0.75$

Working out space:

Fraction to Percentage

Convert Fraction to Percent

$\frac{30}{20}$ = 150 %	$\frac{13}{25}$ = 52 %	$\frac{8}{25}$ = 32 %
$\frac{81}{50}$ = 162 %	$\frac{16}{10}$ = 160 %	$\frac{93}{50}$ = 186 %
$\frac{31}{25}$ = 124 %	$\frac{29}{20}$ = 145 %	$\frac{16}{20}$ = 80 %
$\frac{13}{20}$ = 65 %	$\frac{22}{25}$ = 88 %	$\frac{53}{50}$ = 106 %
$\frac{9}{25}$ = 36 %	$\frac{11}{25}$ = 44 %	$\frac{18}{50}$ = 36 %
$\frac{28}{20}$ = 140 %	$\frac{24}{25}$ = 96 %	$\frac{14}{50}$ = 28 %
$\frac{3}{25}$ = 12 %	$\frac{68}{50}$ = 136 %	$\frac{27}{25}$ = 108 %
$\frac{36}{25}$ = 144 %	$\frac{11}{10}$ = 110 %	$\frac{23}{20}$ = 115 %
$\frac{8}{10}$ = 80 %	$\frac{56}{50}$ = 112 %	$\frac{42}{25}$ = 168 %
$\frac{34}{25}$ = 136 %	$\frac{9}{20}$ = 45 %	$\frac{22}{20}$ = 110 %

Working out space:

FINDING PERCENTAGES SHEET 2 ANSWERS

A) Multiples of 1%

1)	3% of 400 = **12**	2)	2% of 60 = **1.2**	3)	5% of 200 = **10**
4)	1% of 270 = **2.7**	5)	7% of 500 = **35**	6)	4% of 1200 = **48**
7)	2% of 330 = **6.6**	8)	8% of 300 = **24**	9)	6% of 2000 = **120**
10)	9% of 700 = **63**	11)	3% of 6000 = **180**	12)	1% of 70 = **0.7**

B) Multiples of 10%

1)	20% of 80 = **16**	2)	50% of 130 = **65**	3)	70% of 50 = **35**
4)	30% of 12 = **3.6**	5)	60% of 80 = **48**	6)	40% of 120 = **48**
7)	80% of 400 = **320**	8)	10% of 7 = **0.7**	9)	90% of 80 = **72**
10)	50% of 320 = **160**	11)	30% of 600 = **180**	12)	70% of 11 = **7.7**

C) Mixed

1)	40% of 200 = **80**	2)	3% of 50 = **1.5**	3)	20% of 140 = **28**
4)	60% of 3 = **1.8**	5)	30% of 80 = **24**	6)	7% of 800 = **56**
7)	4% of 150 = **6**	8)	90% of 20 = **18**	9)	50% of 36 = **18**
10)	30% of 800 = **240**	11)	6% of 20 = **1.2**	12)	3% of 220 = **6.6**
13)	70% of 60 = **42**	14)	40% of 210 = **84**	15)	5% of 500 = **25**

1. 30kg
2. 6 litres
3. £12
4. 25 pages
5. 12 miles

Percentage Increase and Decrease

1) Increase 200 by 30%: 260

2) Increase 200 by 45%: 290

3) Increase 400 by 15%: 340

4) Increase 1000 by 26%: 740

5) Increase 1000 by 55%: 1550

6) Increase 1200 by 40%: 720

7) Increase 1400 by 55%: 630

8) Increase 400 by 43%: 572

9) Increase 1100 by 9%: 1199

10) Increase 1300 by 7%: 1391

1. Oliver's salary is £18,000 and he is due to get an increase of 4%.
How much will this increase be?

18000 x 0.04

1% = 180 or [redacted]

4% = 720

£ 720

(2)

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2. A new TV is priced at £320
In a sale it is reduced by 45%

or 320 x 0.55

Calculate the sale price

1% = 3.2

45% = 144

320 - 144 =

£ 176

(3)

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3. Joanne sees this special offer in a shop.

Special Offer	
iPod	£189
Headphones	£25

Buy both items and receive a 4% discount

Joanne buys both items.

or 214 x 0.96

How much does she pay?

189 + 25 = 214

1% = 2.14

4% = 8.56

214 - 8.56

£ 205.44

(3)

4. Barry earns £1300 a month. He spends 30% of this money on rent and 12% on bills.

How much of the £1300 has he left?

Rent
1% = 13
30% = 390

Bills
1% = 13
12% = 156

1300 - 390 - 156

or 1300 × 0·3 = 390
1300 × 0·12 = 156
1300 - 390 - 156 = 754

£ 754

(3)

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5. A carton of orange juice contains 540ml.
A special offer carton contains an extra 35%.

How many millilitres of orange juice are in the special offer carton?

1% = 5.4
35% = 189

540 + 189

or 540 × 1·35

729 ml

(3)

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6. There are 52800 fans at a football match between Rovers and City.
37% of the fans support Rovers.

How many fans at the match support City?

63% support City.

1% = 528
63% = 33264

or 52800 × 0·63

33264

(3)

Comprehension

Workout 13 — pages 50-53

1. A
"persistent" can mean 'continuing to occur in a steady way'.

2. C
'recently' means 'not very long ago'. Line 3 states that the clock has been in Evan's family for "three hundred years", so it can't have been bought recently.

3. B
'exceptional' means 'unusual'. Lines 4–5 state that "There was nothing out of the ordinary about the clock face", which shows that there is nothing unusual about it.

4. D
Lines 10–11 state that the case "twinkled" when it "caught the rising light of dawn". This suggests that the case reflects the light and sparkles slightly.

5. B
Lines 14–15 state that the door is "overshadowed by the surrounding extravagance", which means that it doesn't stand out as much as the decorations around it.

6. C
Line 16 states that "The timepiece soothed Evan." "soothed" can mean 'calmed', which suggests that the clock makes Evan feel relaxed.

7. D
Line 21 states that Evan "half ran, half fell across the room". This shows that he rushes to look at the clock and nearly loses his balance.

8. 90 minutes
There are 60 minutes in an hour, and 30 minutes in half an hour. So the film is 60 + 30 = 90 minutes long.

9. 2, 3, 6, and 9
18 ÷ 2 = 9, so 2 and 9 are factors of 18.
18 ÷ 3 = 6, so 3 and 6 are factors of 18.

Verbal Reasoning

TYPE THIRTEEN:	TYPE FOURTEEN:
car	sparkle
36	parade
orange	daisy
sergeant	stronger
toddler	refine
cup	failure
3.15 a.m.	sorceror
July	travel
hour	trail natal
pentagon	curse rescue
£4.40	trample linear
tug	notes stone
Wednesday	soap strap
366	facet magnet
fifth	lease class
dog	shopper stoop
word	metal steal
river	steak freak
shopping bag	motion spoon
trio	credit tread

Type Fifteen

4

J

16TH

S

N

I

O

I

RIP

A B C D E

D

N

A

N

AT

IS

T

16TH

11TH

C

TYPE SIXTEEN:

S	U
R	U
J	E
M	J
O	R
K	J
I	R
Q	K
C	X
MO	PR
MG	OE
MM	RO
IG	JF
DG	WS
SR	QT
PT	
IF	
GK	
HZ	
FT	

TYPE SEVENTEEN:

2	4	1	5	3
2	5	4	3	1
5	3	2	1	4
2	5	3	4	1
3	1	4	5	2
5	4	3	2	1
1	2	3	4	5
5	3	2	1	4
1	3	5	2	4
2	1	3	5	4
1	4	2	3	5
1	2	4	3	5
3	2	1	4	5

truant
sample
dictate
thoughtless
augment

TYPE EIGHTEEN:

mechanic car garage
doctor patient measles
fire-engine house fire
blackbird egg nest
which car garage
lady spectacles handbag
which platform 6 p.m.
pupil books library
boy ball net
artist portrait easel
robber bank mask
when school sister
who ceiling now
boy scooter wall
boat two Tuesday
boy playground lunch

TYPE NINETEEN

ELEVEN
SWIMMING
TALENT
TROUT
TOWER
LEAD
DESERT
PETALS
FUEL
SNOWDROP
TOMATO
THIRST
VIOLET
DIARY
ELBOW
CHILD
GOSLING
CHURCH
PALACE
WARDROBE

TYPE TWENTY:

row
sit
age
all
art
rod
ram
eat
hem
dab
her
ark
ask
fir
eel
tea
him
and
kin
too

TYPE TWENTY-ONE:

T
O
P
D
E
G
T
H
R
K
T
P
T
L
P
B
D
Y
W
B

Non -Verbal Reasoning

Section 1 — Complete the Pair

1. A

The figure gets larger and its shading changes to white spots on a black background.

2. B

The central shape becomes larger and moves behind the other shapes.

3. A

The figure reflects across.

4. C

The top circle disappears.

5. D

The figure rotates 180 degrees and changes shading.

A larger white version of the same shape appears behind it.

Section 2 – Find the Figure Like the First Three

1. B

All figures must have a circle inside a large white shape.

2. D

In all figures, there must be a black circle in the middle of the square and another circle on one of the squares corners.

3. D

In all figures, the upper body and lower fins of the shark must be shaded the same.

4. D

In all figures, there should be two shapes overlapping each other. One of the shapes must be hatched and must be at the back of the figure.

5. B

In all figures, the two arrows must point in the same direction and be on either side of the zigzag line. The arrows must have opposite shaded heads and tails.

Section 3 – Reflect the Figure

1. C

In Option A the black circles are in front of the white shape. Option B has three black circles. Option D is a 60-degree clockwise rotation.

2. D

Option A has been reflected, but the smaller shape has been rotated. In options B and C, the shapes are wrong, and option C also has the wrong shading.

3. D

Option A is a 90degree anticlockwise rotation. In option B, the lowest white rectangle is on the wrong side. In option C, a small white rectangle is missing.

4. D

Options A, B and C are the wrong shape

5. A

Option B has been rotated 180degrees (excluding the crown). In option C, the crown has not been reflected.

Section 4 – Complete the Series

1. C

The number of horizontal lines increases By one in each series square.

2. C

In each square series, the white ellipse turns black, and a new white ellipse appears.

3. B

The arrow and the circle rotate together 90degrees clockwise in each square series. The shading of the circle alternates between black and white.

4. C

In each series square, one 'book' is taken away from the right-hand side of the figure.

5. D

The black and grey shadings move up one shape in each series square. (When a shading reaches the top shape, it starts again in the bottom shape.)

Section 5 — Look at the Figure from the Top

1. D

There is a line of three blocks on the right-hand side of the figure, which rules out options A and B. There should be four blocks visible from above, which rules out option C.

2. C

There are two blocks at the front of the figure, which rules out options A and D. There should be five blocks visible from above, which rules out option B

3. B

There should be four blocks visible from above, which rules out options and C. There should be two blocks on the right-hand side of the figure, which rules out option D.

4. D

There should be four blocks visible from above, which rules out options A and C. There is only one block on the right of the figure, which rules out option B.

Section 6 — Complete the Grid

1. A

In option D, the crown has been rotated 180 degrees.

turns grey and gains a point.

2. E

Working from left to right, the figure reflects across and becomes white with black dots.

3. D

In each row. The figure in the right-hand grid square is made from the lines in the left-hand square and the flower from the middle grid square.

4. B

Working from left to right, the figure rotates 90 degrees clockwise and gains one dot.