



TALENT POOL ACADEMY

Name:

Year Group:

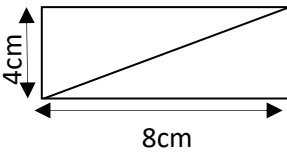
MATHEMATICAL REASONING

BOOK 4

SECTION 1 | TEST 1

A	Answer
1. $2458 + 632$	_____
2. $13 - 9 + 21 =$	_____
3. $1786 - 456 =$	_____
4. $(21 \times 7) + 5 =$	_____
5. $(64 - 8) \div 8 =$	_____
6. $\frac{3}{10}$ of 200g =	_____
7. $3\frac{1}{4}$ h = _____ min	_____
8. £3.15 = <input type="text"/> 5ps	_____
9. 2km 250m = <input type="text"/> m	_____
10. 650g + <input type="text"/> g = $1\frac{3}{4}$ kg	_____
11. £6.35 = <input type="text"/> p	_____
12. <input type="text"/> 10ps + five 2ps = £2.80	_____


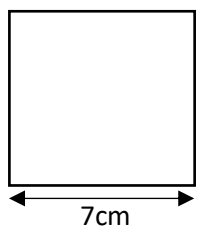
B	Answer
1. Write in digits the number nine thousand and nine.	_____
2. How many groups of 4 are there in 8 sixes?	_____
3. What is the difference in pence between $\pounds\frac{1}{6}$ and $\pounds\frac{3}{4}$?	_____
4. How many tens are equal to 1070?	_____
5. Find the total of 53p and £1.37.	_____
6. By how many grams is $\frac{1}{2}$ kg heavier than 280g?	_____
7. Find the cost of ten hairbands at 15p each.	_____
8. How many millimetres are there in 12.8cm?	_____
9. How much change from 40p after spending 14p and 13p?	_____
10. Change to 24-hour clock times.	
a. 6.35 a.m.	_____
b. 9.45 p.m.	_____
11. Find the smallest number which will divide by both 4 and 12 without a remainder.	_____
12. What sum of money when multiplied by 9 equals £1.35?	_____

C	Answer			
1. In a box were 64 cards. How many cards were there in eight boxes? _____	_____			
2. In the number 9647 how many times is the 9 greater than the 4? _____	_____			
3. The temperature was 5°C and dropped by 9°C. what is the new temperature? _____	_____			
4. The rectangular card is cut into two equal parts along a diagonal. Find the area of each part.				
	_____			
5. What are the next two numbers in this sequence? $\frac{1}{10}, 1, 10, \square, \square$ _____	_____			
6. Find the difference in cost between 15 items at 4p each and 14 items at 4p each. _____	_____			
7. A bus leaves its station at 8.40 a.m. and arrives at its destination at noon. How long does the journey take? _____	_____			
8. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Price of fabric</th> </tr> </thead> <tbody> <tr> <td>A £5.96 per metre</td> </tr> <tr> <td>B £4.28 per metre</td> </tr> </tbody> </table>	Price of fabric	A £5.96 per metre	B £4.28 per metre	
Price of fabric				
A £5.96 per metre				
B £4.28 per metre				
By how much is fabric A more expensive per metre than fabric B? _____	_____			
9. The mass of cereal in a box is 850g. Find in kilograms and grams the mass of the cereal in 4 boxes. _____	_____			
10. The minute hand of a clock turns from pointing to the number 3 to the number 9. Through how many degrees has it turned? _____	_____			
11. A cheesecake is cut into 10 equal pieces. What fraction of the cheesecake is six pieces? _____	_____			
12. John had £56. What fraction of his money is £8? _____	_____			


SECTION 1 | TEST 2

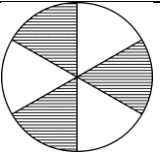
A	Answer
1. $285 - 142 =$	_____
2. $28 + 5 = 30 +$ <input type="text"/>	_____
3. $54 \times 4 =$	_____
4. $918 \div 9 =$	_____
5. $\pounds 2.45 - 86\text{p} =$ <input type="text"/> p	_____
6. 36 quarters = <input type="text"/>	_____
7. $\frac{3}{4}$ of $\pounds 6.52 =$	_____
8. $4250\text{m} =$ <input type="text"/> km <input type="text"/> m	_____
9. $2\text{kg } 850\text{g} =$ <input type="text"/> g	_____
10. $\pounds 14 - \pounds 0.76 =$	_____
11. $25468 - 2564 =$	_____
12. The time on the clock is 3:45pm and is 15min slow. Write the correct time using a.m. or p.m.	_____

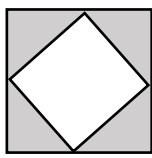
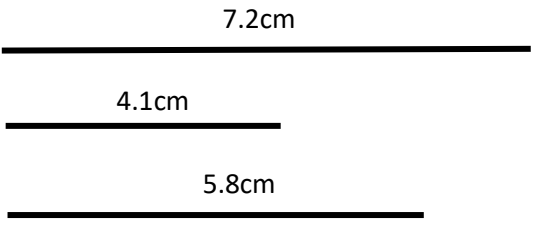

B	Answer
1. Find the missing number. $4250 +$ <input type="text"/> $+ 5 = 5000$	_____
2. Write the number 126 using Roman numerals.	_____
3. Share $\pounds 1.47$ equally among seven people. How much each?	_____
4. Write 12.2m in centimetres.	_____
5. Which of these numbers divide by 4 without a remainder? 8, 24, 31, 42, 56, 64	_____
6. Find the value of a. $\frac{1}{5}$ of $\pounds 45$ b. $\frac{4}{5}$ of $\pounds 45$	_____
7. Write 2569 to the nearest 1000.	_____
8. How many grams in $3\frac{3}{4}$ kg?	_____
9. Find the change from $\pounds 2$ after spending 18p and 36p.	_____
10. What is the mean average of 4cm, 6cm, 9cm and 14cm?	_____
11. Change to 12-hour clock times. a. 07:15 b. 21:36	_____
12. 5 crayons cost $\pounds 1.05$. Find the cost of one crayon.	_____

C	Answer
1. A cricketer scored 8 runs short of a century. How many runs did he score?	_____
2. $2 \times 8 = 16$ Write the value of 20×80 .	_____
3. The price of fish is $\pounds 4.20$ per kg. What is the cost of 2kg 250g?	_____
4. How many 5cm strips can be cut from a length of 2m 30cm?	_____
5. There are 25l in the petrol tank of a car. If it is $\frac{2}{3}$ full, how many more litres will it hold?	_____
6. Find the total value of nine 20p coins, four 10p coins and three 50p coins.	_____
7. A school holiday started on 12 June and ended on 8 August. How many days holiday was there?	_____
8. A plane is flying due east. It turns clockwise through half a right angle. Through how many degrees does it turn?	_____
9. The diagram shows how three children shared a prize of $\pounds 80$. How much did each child receive?	
	
Tim	_____
Sam	_____
David	_____
10. A train leaves at 14:50 and arrives at midnight. How long does the journey take in hours and minutes?	_____
11. The price of butter increased from $\pounds 1.15$ to $\pounds 1.24$ per 500g. How much extra is paid for 5kg?	_____
12. Find the area of this square.	_____
	

SECTION 1 | TEST 3

A	Answer
1. Write in words the number shown on the abacus	_____
	_____
2. $500 + 40 + 5$ tenths.	_____
3. $25645 + 2020 =$	_____
4. Round 26548 to the nearest 10.	_____
5. $£5.10 = \square$ 10ps	_____
6. $15.1\text{cm} = \square$ mm	_____
7. $25.1 \times 10 =$	_____
8. $45 \div 10 =$	_____
9. $15.5 = \square$ tenths	_____
10. $159\text{g} + \square \text{g} = 0.5\text{kg}$	_____
11. $3.4\text{l} = \square$ ml	_____
12. 14, 8, 2, -4, \square , \square	_____

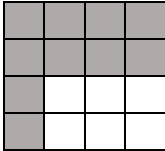
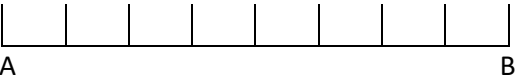
B	Answer
1.  What decimal fraction of the circle is shaded?	_____
2. Write as a decimal, thirty and eight tenths.	_____
3. Of these fractions $\frac{1}{2}$, 0.4 , $\frac{1}{4}$, 0.1 which is the largest	_____
4. Find the mean average of 8, 12 and 5	_____
5. Write 149 using Roman numerals.	_____
6. Find the cost of 50g rice at 89p per $\frac{1}{2}$ kg	_____
7. What length is 4 times longer than 2.7cm?	_____
8. How many months in the year have 31 days?	_____
9. Share £4.00 exactly among 4 children. How much each?	_____
10. Write each of these quantities to the nearest whole unit.	_____
a. 39.4km	_____
b. 21.7l	_____
11. What number is 4 less than zero?	_____
12. How many hours and minutes from 09:05 to 10:55?	_____

C	Answer
1. What fraction of the square is Unshaded?	_____
	_____
2. Sam has 35p and Ryan has $\frac{2}{5}$ of this amount. How much have they altogether?	_____
3. On a coordinate grid, point A is at (1, 3). It is then moved one square to the right. What are its new coordinates?	_____
4. Find in millimetres the difference between the longest and shortest of these lines.	_____
	_____
5. John bought a book for £1.20 and gave six 5ps and the rest in 10ps. How many 10ps did she give?	_____
6. By how many grams is a mass of 1.69kg heavier than mass of 650g?	_____
7. What is the date 15 days later than Christmas Day (25th December)?	_____
8. Of these angles which two when added together make two right angles?	_____
73° 124° 35° 117° 56°	_____
9. Material for a dress costs £4.25 per metre. Find the cost of	_____
a. 8cm	_____
b. 80cm	_____
10. Two cans each hold 500ml. By how many millilitres is their total volume less than 2.3l?	_____
11. A shopkeeper bought eight pens for 96p. He sold them to make a profit of 25p. For how much did he sell each pen?	_____
12. The length of the play area is twice the width. Find	_____
a. Its perimeter	_____
b. Its area	_____
	_____

SECTION 1 | TEST 4

A	Answer
1. $845 - 464 =$	_____
2. $7.04 = 7 + \frac{1}{\quad}$	_____
3. $3.25 + 2.04 =$	_____
4. $£5.12 = \square \text{ p}$	_____
5. $6.34\text{cm} = \square \text{ m}$	_____
6. Write $\frac{1}{8}$ as a decimal	_____
7. $68954 - 2450 =$	_____
8. $1.02 \times 30 =$	_____
9. Find in grams	
a. 0.4 of 1kg	_____
b. 0.54 of 1kg	_____
10. Write as decimal 209 hundredths	_____
11. Round 986250 to the nearest 1000	_____
12. $0.48 + \square = 1$	_____

B	Answer
1. Write as a decimal, $50 + \frac{6}{10} + \frac{3}{100}$.	_____
2. What is the value in pence of the digit underlined?	
a. £120. <u>3</u> 0	_____
b. £20. <u>0</u> 4	_____
3. Write in metres and centimetres 224.54m.	_____
4. Write the missing signs +, -, x or ÷ $8 \square 4 = 3 \square 4$	_____
5. Write as a decimal 12 tenths and 8 hundredths.	_____
6. Decrease 0.4l by 250ml.	_____
7. How many hours and minutes from 3.35 p.m. to 5.15 p.m.?	_____
8. Write the missing numbers	
a. $\frac{8}{12} = \frac{\quad}{3}$	_____
b. $\frac{21}{24} = \frac{\quad}{8}$	_____
9. Divide £24 by 4 exactly.	_____
10. Find the area of a rectangle measuring 7.4cm by 5cm.	_____
11. Divide 50kg by 100. Give the answers in grams.	_____
12. Which of these fractions are of equal value?	
$\frac{3}{4}$ 0.6 0.75 $\frac{7}{10}$	_____

C	Answer
1. 	
Write as a decimal fraction the part of the square which is:	
a. Shaded	_____
b. Unshaded	_____
2. Badges cost 7p each. How many can be bought for £1.47?	_____
3. A teaspoon holds 10ml. How many spoonful in $\frac{1}{2}$ l?	_____
4. Find the missing number in this division.	
$\begin{array}{r} 17r7 \\ 9 \overline{) \square \square \square} \end{array}$	_____
5. Mince costs £2.4 per $\frac{1}{2}$ kg. Find the cost for 400g.	_____
6. A triangle has two equal sides each measuring 24cm. Its perimeter is 1m. Find the length of the third side.	_____
7. There were 7584 people at a concert. Write this number	
a. To the nearest 100	_____
b. To the nearest 10	_____
8. There are two 2 place decimal numbers which are greater than 2.97 but less than 3.00. What are the numbers?	_____
9. Mary collected 200 pennies for the school fund. Sam collected 3 times as many. How many £1 coins did they receive in exchange?	_____
10. David's stride measures 50cm. How many strides will he take in walking 20m?	_____
11. A rectangular path measures 8m long and 70cm wide. Find its area in m^2 .	_____
12. The line AB is drawn to a scale 1cm to 10cm. Find the length the line represents	
	
a. In centimetres	_____
b. In millimetres	_____

SECTION 1 | TEST 5

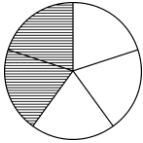
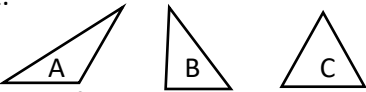
A	Answer
1. Write as a decimal $25 + \frac{3}{5} + \frac{4}{10}$	_____
2. $(8 \times 7) + (0 \times 4) =$	_____
3. $8.04\text{m} = \square \text{cm}$	_____
4. $320\text{g} + \square \text{g} = 600\text{g}$	_____
5. $1.4\text{L} = 740\text{ml} + \square \text{ml}$	_____
6. $\frac{2}{4}$ of £70 =	_____
7. $564820 - 12350 =$	_____
8. $£1.15 - 45\text{p} = \text{£} \square$	_____
9. Write $\frac{3}{8}$ as a decimal fraction	_____
10. $7\text{h } 10\text{min} = \square \text{min}$	_____
11. $15.04 \times 100 =$	_____
12. $£5.14 \div 2 =$	_____

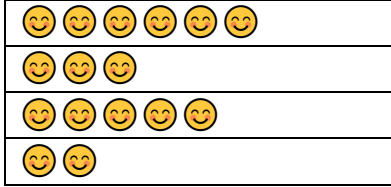
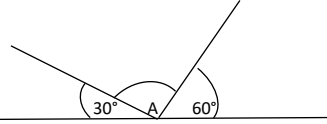
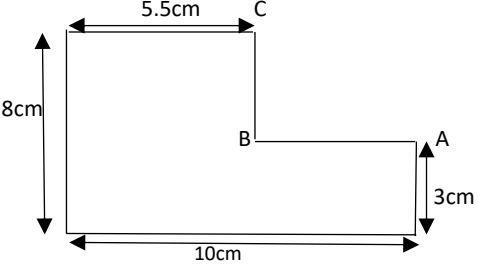
B	Answer
1. Write as a decimal fraction the part of the strip which is a. Shaded b. Unshaded	_____ _____
2. What number is 7 more than 6 x 8?	_____
3. a. Name the eleventh month of the year. b. How many days are there in that month?	_____ _____
4. Find the cost of 100g at £1.40 per kilogram.	_____
5. Find the difference between the largest and smallest of these fractions. $\frac{3}{10}, \frac{1}{2}, \frac{4}{5}, \frac{7}{10}$.	_____
6. Write 20l 450ml to the nearest litre.	_____
7. Which number is 7 less than -3?	_____
8. Find the area in m^2 of a floor measuring 4m by 4m 50cm.	_____
9. Complete this number sequence 0.1, 1, 10, \square , \square	_____ _____
10. Divide 24.8cm into 6 equal parts. Find the length of each part.	_____
11. How many 20ps must be added to 10ps to equal £3.10?	_____
12. 5 crayons cost £1.05. Find the cost of one crayon.	_____

C	Answer
1. Two thousand and four people each bought three tickets. How many tickets was that altogether?	_____
2. How much change from two 50ps after paying for six eggs at £1.40 per dozen?	_____
3. Find in millimetres the difference between the longest and shortest of these lines. <div style="text-align: center;"> </div>	_____
4. Find the mean average mass of 26kg, 15kg and 7kg.	_____
5. Dasal spent $\frac{1}{2}$ of his money on sweets and $\frac{1}{4}$ on bus fares. What fraction of his money is left?	_____
6. How many degrees are there in each of the equal angles at the centre of the circle? <div style="text-align: center;"> </div>	_____
7. How many grams less than 2kg is the total mass? <div style="text-align: center;"> </div>	_____
8. Sam's date of birth is 5 April 1993. John was born exactly 5 years later. Write John's date of birth in digits.	_____
9. The approximate distance between two villages is given as 16km. The actual distance is 15.4km Find the difference in metres.	_____
10. Which two of these fractions are equivalent to $\frac{3}{4}$? $\frac{6}{10}, \frac{9}{12}, \frac{4}{5}, \frac{15}{20}$	_____
11. Mary and Monica have 80p between them. Mary has 12p more than Katie. How much has each? a. Mary b. Monica	_____ _____
12. Find the missing measurement market b. <div style="text-align: center;"> </div>	_____

SECTION 1 | TEST 6

A	Answer
1. $24p + 48p + £2.54 = £ \square$	_____
2. $54 \div 7 =$	_____
3. Write as a decimal 803 hundredths.	_____
4. $\frac{1}{4}$ kg - \square g = 85g	_____
5. $£1.08 \times 7 =$	_____
6. $0.7 + \square = 1.2$	_____
7. How many minutes from 7.14 a.m. to 10.59 a.m.?	_____
8. \square ml + 2560ml = 3.5l	_____
9. $26.4 \div 10 =$	_____
10. $\frac{8}{9} = \frac{\quad}{100}$	_____
11. 0.5 of £14.80 =	_____
12. $\angle A + \angle B + \angle C = \square^\circ$	_____

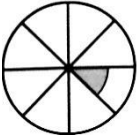
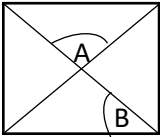
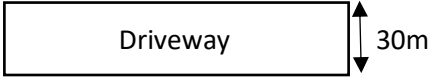
B	Answer
1. Write the part which is shaded  <p>a. As a simple fraction _____ b. As a decimal fraction _____</p>	_____
2. From 8 times 6 take away 4.	_____
3. Write the 24-hour clock time for 15min before midnight.	_____
4. Find the cost of 35cm at 45p per metre.	_____
5. Write 8kg 450g to the nearest $\frac{1}{2}$ kg.	_____
6. Find the difference between 3.8l and 6l	_____
7. What length in centimetre is $\frac{1}{5}$ of 6m?	_____
8. Find the total of $3\frac{1}{4}$, 2 and 5.	_____
9. How many 2ps are worth £1.24?	_____
10. A square has sides measuring 12cm. Find its perimeter.	_____
11. Complete the number sequence 0.03, 0.3, 3, \square , \square	_____
12.  Which of these triangles is? a. A right-angled triangle _____ b. An acute-angled triangle _____	_____

C	Answer
1. Find the total of $\frac{3}{4}$ kg, 600g and 350g. Write the answer in kilograms and grams.	_____
2. What is the value of the digit underlined in each of these numbers? a. 70 <u>3</u> 7 _____ b. 68. <u>3</u> 4 _____	_____
3. Find the mean average of smileys 	_____
4. Jasmine bought nine sweets at 5p each. How much change did she get if she paid 50p? _____	_____
5. How many degrees are there in the angle marked A? 	_____
6. The population of a town is 16782. Write the number: a. To the nearest 1000 _____ b. To the nearest 100 _____	_____
7. Find the smallest number which can be added to 34 to make a number which is exactly divisible by 6 _____	_____
8. Seven balloons cost 42p. find the cost of four balloons _____	_____
9. Four children each had an equal share of a sum of money. They each received 19p and there was 4p left over. Find the sum of money. _____	_____
10. Two angles of a triangle each measure 60° . Find the size in degrees of the third angle. _____	_____
11. What liquid measure is equal to 0.1 of 10l? _____	_____
12. Find the length of a. The side AB _____ b. The side BC _____	_____
	_____

SECTION 1 | TEST 7

A	Answer
1. $\frac{7}{12} + \square = 2$	_____
2. write as a decimal $17 + \frac{5}{100}$	_____
3. $18.4 = \square$ tenths	_____
4. $(4 \times 4) + 4 =$	_____
5. $3\text{km} + \frac{3}{2}\text{km} + \frac{1}{8}\text{km} = \square \text{m}$	_____
6. Find the missing number $4500 + 120 + \square + 6 = 4700$	_____
7. $\pounds 1.00 - 26\text{p} = \pounds \square$	_____
8. $250\text{g} + \square \text{g} = 1\text{kg}$	_____
9. How many thirds in $2\frac{2}{3}$?	_____
10. 0.5 of $\pounds 14.80 =$	_____
11. $18\text{p} \times 8 =$	_____
12. $0.3\text{l} - \square \text{ml} = 110\text{ml}$	_____

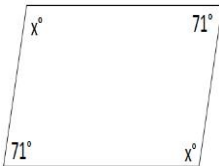

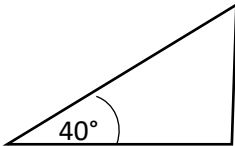

B	Answer
1. $5^2 = 5 \times 5 = 25$. Find the value of 4^2 .	_____
2. Add 4 hundredths to 5.05.	_____
3. What is the difference between 75p and $\pounds 4.50$?	_____
4. How many hours and minutes are there in 215min?	_____
5. Find the cost of eight lemons at 15p each.	_____
6. Fill in the missing numbers $\frac{8}{20} = \frac{2}{\square}$	_____
7. How many grams must be added to 450g to make $5\frac{1}{2}$ kg?	_____
8. Write 500 using Roman numerals.	_____
9. A square has sides measuring 9cm. Find its area.	_____
10. By how many millimetres is 7.5cm longer than 65mm?	_____
11. Divide $\pounds 4.25$ into 4 equal parts. What is the value in pence of each part?	_____
12. $(8 \times 6) = (3 \times 6) + (p \times 6)$ Find the number p stands for.	_____

C	Answer
1. Write in digits the number which is 85 less than eight thousand.	_____
2. Find the value of nine 10p coins, four 20p coins and five 50p coins.	_____
3. All the angles at the centre of the circle are equal.  How many degrees are there in the marked angle?	_____
4. 2l of water has a mass of 4kg. Find in grams the mass of water in a bottle which holds $\frac{1}{2}$ l.	_____
5. Give the size in degrees of:  a. Angle A b. Angle B	_____ _____
6. In a test, John scored 65 out of 100. What fraction (with the denominator 10) of the total did he score?	_____
7. Chloe has $\pounds 2.4$ and Anna has $\frac{3}{5}$ of this amount. How much have they altogether?	_____
8. How many days are there from 14 August to 22 September? Do not count the first day.	_____
9. Find the mean average of 8, 3, 4, 6 and 12	_____
10. The driveway is 4 times as long as it is wide. Find: 	_____
a. Its length	_____
b. Its perimeter	_____
11. By how many m^2 is the area of the driveway more than 900m^2 ?	_____
12. Chris doubles his savings every week for 4 weeks. In the first week he saved 40p. how much did he save in the fourth week?	_____

SECTION 1 | TEST 8

A	Answer
1. $4.08 = \square$ hundredths	_____
2. Write as a 24-hour clock time 45 minutes after midnight	_____
3. Write as a decimal $150 + \frac{2}{10} + \frac{4}{100}$	_____
4. $876520 + 45680 =$	_____
5. Find the value of x if $48 \div 6 = 32 \div x$	_____
6. $\pounds 2.00 - (\text{seven } 10\text{ps} + \text{six } 5\text{ps}) =$	_____
7. $25^\circ + 85^\circ + \square^\circ = 180^\circ$	_____
8. $\frac{1000}{4} =$	_____
9. $\pounds 2.98 = \square$	_____
10. $\square \text{ ml} \times 10 = 1.5\text{l}$	_____
11. $\pounds 3.64 \div 6 = \square \text{ p}$	_____
12. $250\text{g} + 78\text{g} + 32\text{g} = \square \text{ kg}$	_____

B	Answer
1. Add 4 to 8^2	_____
2. Change these times to 12-hour clock times using a.m. or p.m. a. 09:15 b. 21:50	_____ _____
3. Write to the nearest whole number $7\frac{6}{10}$.	_____
4. Decrease $\pounds 2.35$ by 65p.	_____
5. By how many metres is 2545m less than 4.2km?	_____
6. Find the total of seventeen 20ps and eight 10ps.	_____
7. What is the difference in milliliters between $\frac{3}{4}$ l and 450ml?	_____
8. How many grams are equal to 0.45kg?	_____
9. A square has sides measuring 18cm. Find its perimeter.	_____
10. $\frac{1}{2}$ kg costs $\pounds 1.20$. Find the cost of 200g.	_____
11. Find the area of a square with sides of 25cm.	_____
12. $816 \div y = 8$. Find y.	_____

C	Answer
1. By how many is 9^2 greater than 7^2 ?	_____
2. How many a. Tenths are equal to 48.4 b. Hundredths are equal to 50.65?	_____ _____
3. The four angles of any quadrilateral together equal 360° . Find in degrees the size of the angles marked x.	_____
	
4. Seven nails have a mass of 100g. How many nails have a mass of $\frac{1}{2}$ kg?	_____
5. Through how many degrees does the hour hand of a clock turn from noon to 4:00 p.m.	_____
	
6. Write these numbers so that the value of the digit 7 in each number is 7 hundredths. a. 1607 b. 97	_____ _____
7. A right-angled triangle contains an angle of 40° . Find the size of the third angle	_____
	
8. When a barrel is $\frac{1}{5}$ full it holds 25l. How many litres will it hold when $\frac{1}{2}$ full?	_____
9. Find to the nearest kilometre the distance by road from Batey to Skiptley.	_____
	
10. A game which costs $\pounds 22.50$ is paid for at the rate of 50p per week. How many payments are made?	_____
11. A bus run at 25min intervals. If the first bus leaves at 06:30, find the starting time of the third bus.	_____
12. What is the cost of 2kg 400g at 70p per kilogram?	_____