Key Stage 2

Mathematics

Reasoning: Pack 2 Test 2a

Name	
Date	

/35

total marks

Name: Date:

/35 total marks

Key Stage 2 Maths Reasoning: Pack 2 Test 2a

1) Continue these sequences:

210	280	350			

6.3	7.2	8.1			

2 marks

2)

a) List all the prime numbers between 30 and 60:

1 mark

b) Write all the prime factors of 20:

1 mark

3) What can be added to 0.981 to make 1?

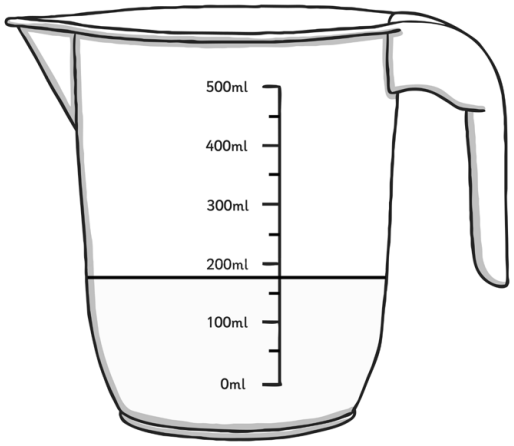
Answer:

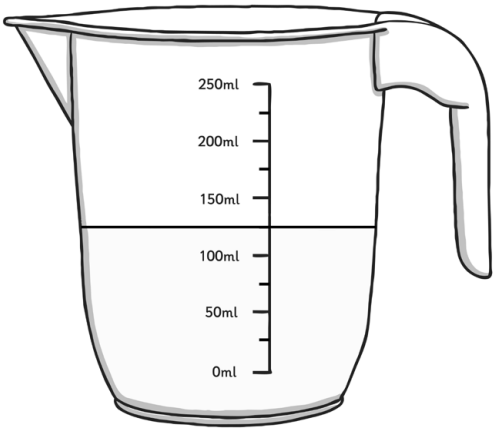
1 mark

Total for this page

4)

a) How much liquid is there in each jug?





Answer:

Answer:

1 mark

b) Calculate how much more liquid is in one jug than the other:

Answer:

1 mark

5) Write the number 117 906 in words:

1 mark

6) What number do these Roman numerals represent?

DCCLXIX	Answer:

1 mark

Total for this page

7) Which digit represents the number of thousands in the following number?

468 327	Answer:

1 mark

8) Explain why 0.64 x 1000 = 640:

1 mark

9) Complete these equations using the following symbols:

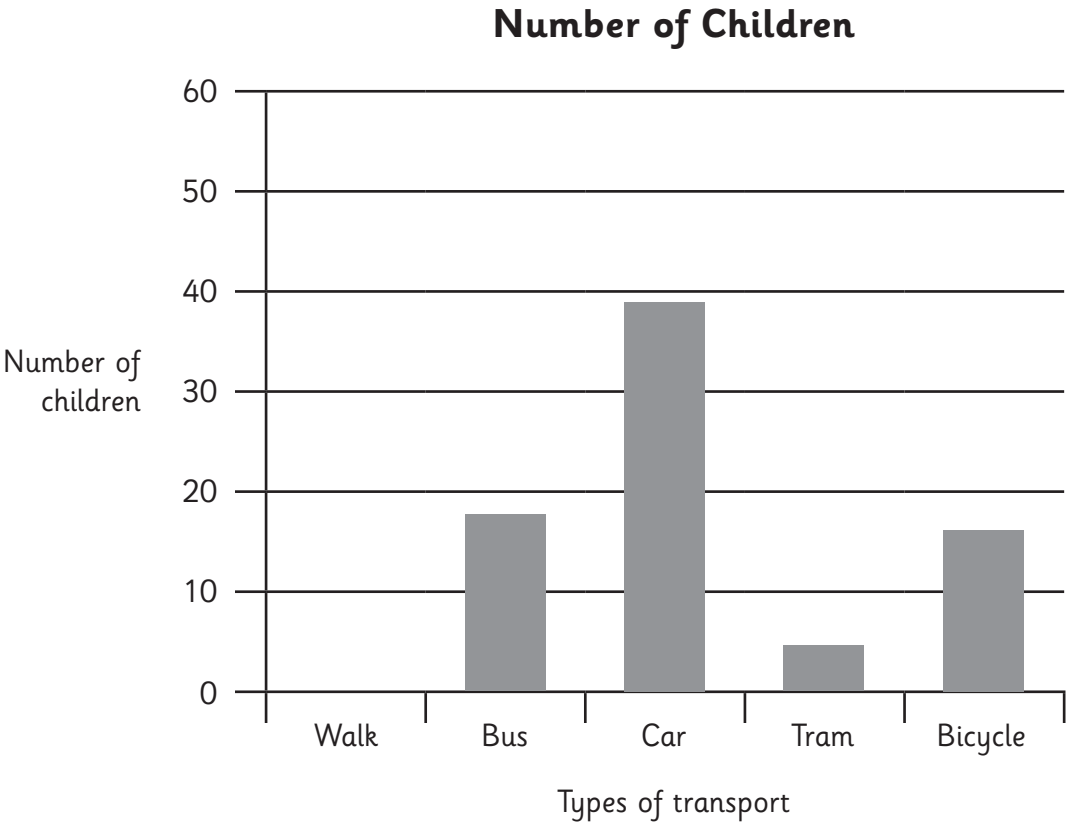
	< or > or =	
$\frac{3}{4}$		$\frac{9}{12}$
$\frac{3}{5}$		$\frac{13}{20}$
$\frac{1}{3}$		$\frac{2}{9}$

1 mark

Total for this page

10) Some children researched the different ways a group of children travelled to school on one day. Here is a table and bar chart showing the results:

Transport	Tally	Total
Walk	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||	57
Bus	𝍸 𝍸 𝍸 |||	18
Car		
Tram	||||	4
Bicycle	𝍸 𝍸 𝍸 |	16



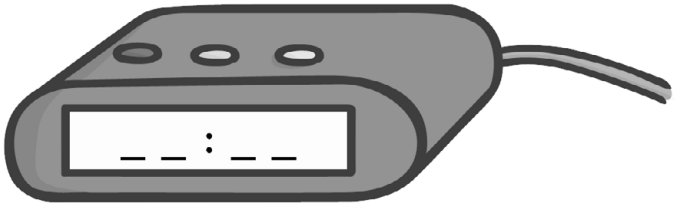
Complete the tally chart and bar graph to show the results.

2 marks

Total for this page

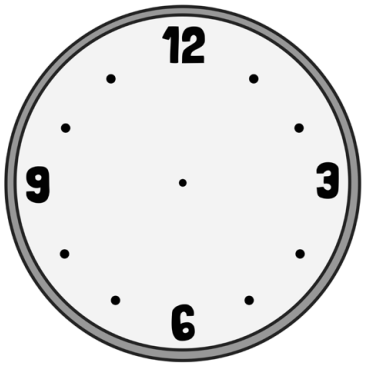
11) Use the clocks below to show the time.

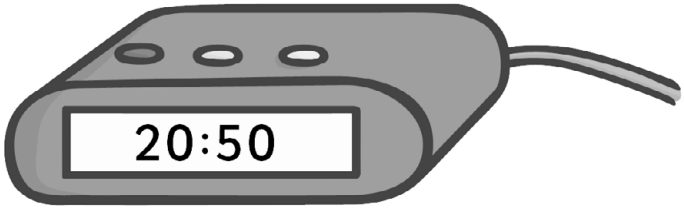
a) Write the time on the analogue clock onto the digital clock:



1 mark

b) Draw the time on the digital clock onto the analogue clock face:



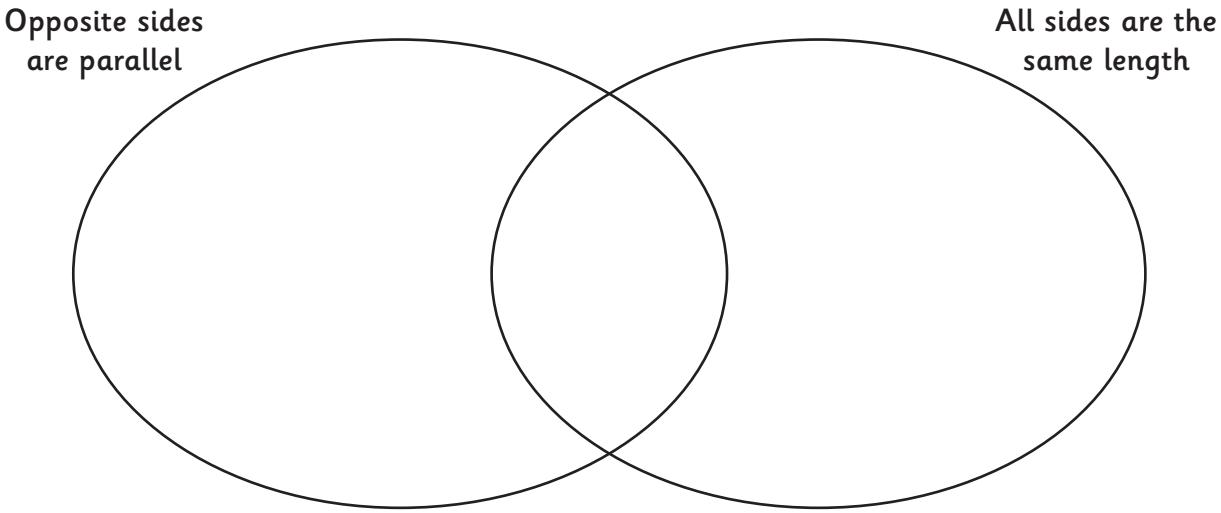


1 mark

12) Here is a set of quadrilaterals:

Rhombus	Trapezium	Rectangle	Parallelogram	Square

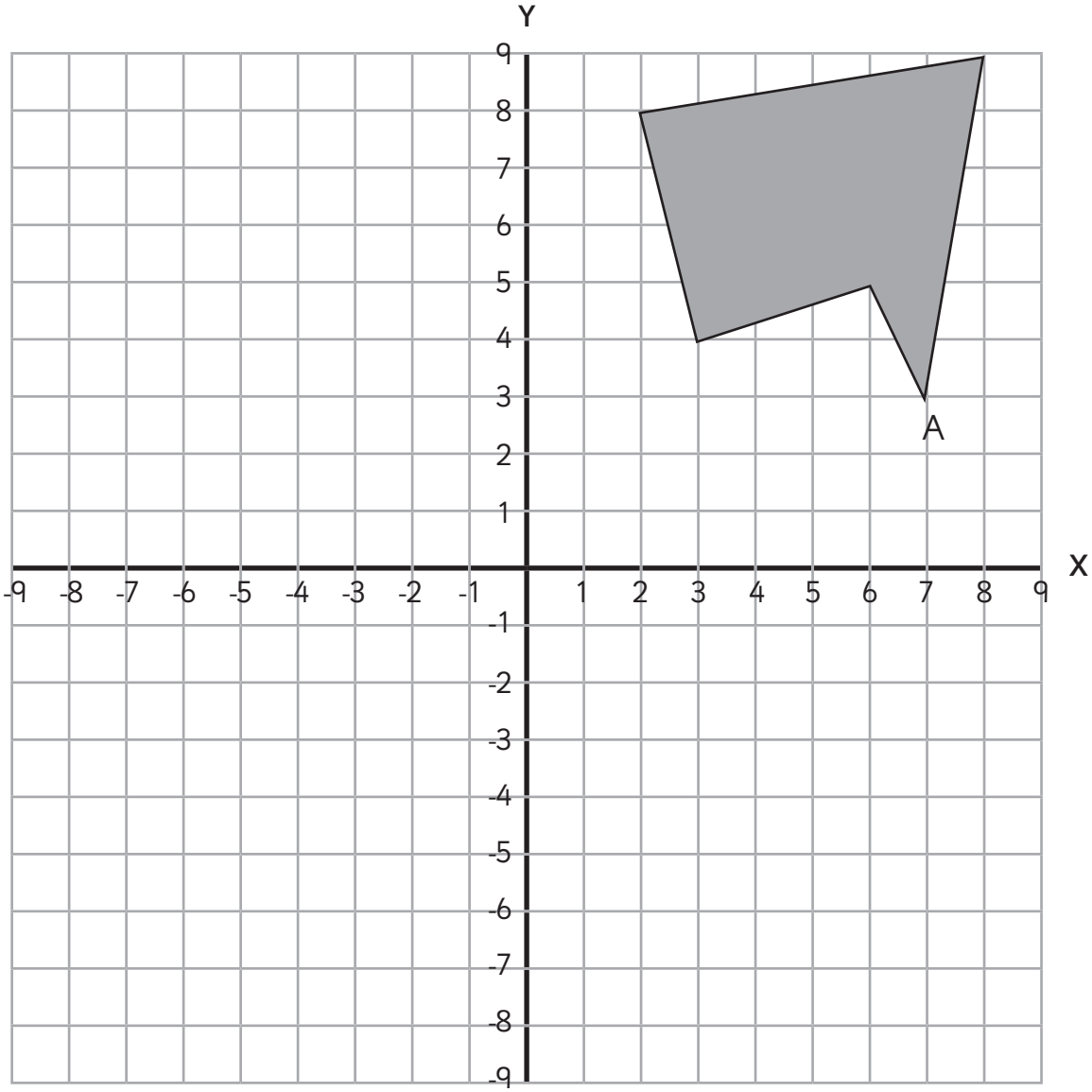
Write the name of each shape in the correct space of this Venn diagram:



2 marks

Total for this page

13) Here is a shape drawn on a coordinate grid:



a) Reflect the shape across the Y axis and then reflect the new shape across the X axis, drawing the two new shapes.

2 marks

b) Write the coordinates of point A on the new shapes:

Y:	X:

2 marks

Total for this page

14) Here is a timetable for a Year 6 class:

	0850 – 0910	0910 – 1010	1010 – 1030	1030 – 1045	1045 – 1115	1115 -1230	1230 -1315	1315 – 1400	1400 – 1445	1445 - 1515
Monday	Registration and Blue Pen work	Literacy	Assembly	Break	SGAP	Maths	Lunch	Topic		Story
Tuesday			Class assembly		Reading			Science		
Wednesday			KS2 assembly		SGAP			PE		Story
Thursday			Singing		Reading			Spanish	RE	
Friday			Celebration assembly		SGAP			Music	Art	

a) What is the total time spent on maths according to the timetable?

Hours: | Minutes:

1 mark

b) There are 38 Spanish lessons in the year. How many hours are spent learning spanish in the year?

Answer:

2 marks

Total for this page

15) Here are some digit cards.

2	3	4	6	7

Use each of these digit cards once to complete this long multiplication calculation:

	☐	☐	☐
		☐	☐
2	0	8	2
6	9	4	0
9	0	2	2

Use the space below to show your working. You may get marks for your ideas:

2 marks

Total for this page

16) Draw an isosceles triangle with 2 sides of length 65mm where the angle between these 2 equal sides is 52°:

2 marks

17) Thomas, Janaid and Sara received a total of £75 for their hard work. Thomas received £8 less than Sara but £5 more than Janaid. How much did they each receive?

Answer:

2 marks

Total for this page

18)

a) For the equation $6a - 2b = 24$, calculate possible values for a and b:

a =	b =

1 mark

b) For the equation $\frac{(5 + m)}{n} = 5$, calculate possible values for m and n:

m =	n =

1 mark

Total for this page

19) Alfie is going to France for a holiday. He wants to take €75 to spend. The exchange rate is £1 = €1.30. Calculate, to the nearest £, how much he well need to exchange for €75?

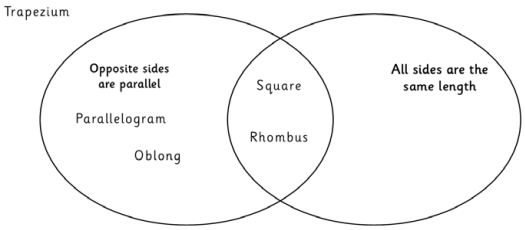
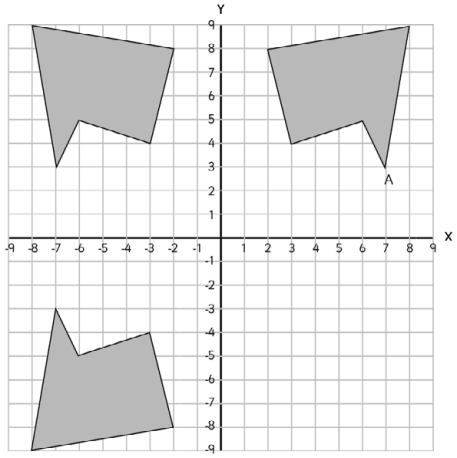
Answer:

2 marks

Total for this page

Answer Sheet: Key Stage 2 Maths Reasoning - Pack 2 Test 2a

question	answer	marks	notes
1.			
	420, 490, 560	1	1 mark for all numbers correct. Allow 9.0. 1 mark for all numbers correct.
	9, 9.9, 10.8	1	
2.			
a	31, 37, 41, 43, 47, 53, 59	1	1 mark for all.
b	2 and 5	1	1 mark for both (allow 2, 2, and 5 as 2x2x5=20).
3.			
	0.019	1	
4.			
a	175ml, 125ml	1	
b	50ml	1	
5.			
	One hundred and seventeen thousand, nine hundred and six	1	
6.			
	769	1	
7.			
	8	1	
8.			
	0.6 x 1000 = 600 0.04 x 1000 = 40 600 + 40 = 640	1	1 mark for any reasonable explanation.
9.			
	3/4 = 9/12 3/5 < 13/20 1/3 > 2/9	1	1 mark for all correct.

question	answer	marks	notes
10.			
	Tally showing 39 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 |||| Bar showing 57	2	1 mark for correct tally and total, and 1 mark for correct bar in graph / chart. Allow 38 with tally for 38. Allow an answer clearly more than half way between 50 and not too close to 60 (e.g 56 – 58).
11.			
a	04:25	1	Allow 16:25
b		1	Ensure hands are clearly different size.
12.			
		2	2 marks for all correct. 1 mark for 3 or 4 correct.
13.			
a		2	2 marks for shape correctly reflected twice. 1 mark for 1 correct reflection, including 1 mark for correctly reflecting an incorrect first reflection.
b	(-7, 2) and (-7, -2)	2	2 marks for correctly writing the coordinates of the shapes drawn in 13a (in any order). 1 mark for 1 correct answer.

question	answer	marks	notes
14.			
a	6 hours and 15 minutes	1	
b	28.5 hours	2	2 marks for correct answer. Allow 28 hours and 30 minutes or 28 1/2 hours 1 mark for correct calculation with only 1 error. Either (45 x 38)/60 or 38 x 0.75.
15.			
	347 x 26	2	2 marks for the correct answer. 1 mark for evidence of some systematic working: e.g. that the units must be 2x6 or 3x4 or 6x7 to produce a 2 in the units.
16.			
	(See end of answers for a scaled version of the isosceles triangle)	2	2 marks for drawing showing no more than 5mm error at 2 corners. 1 mark for drawing within 10mm at 2 corners.
17.			
	Thomas £24 Janaid £19 Sara £32	2	2 marks for correct answer. 1 mark for correct method, but one error in calculation.
18.			
a	Any correct combination e.g. a=5, b=3	1	1 mark for any correct answer.
b	Any correct combination e.g. m=5, n=2	1	1 mark for any correct answer.
19.			
	£58 75 ÷ 1.3 = 57.69	2	2 marks for the correct answer. 1 mark for correct calculation (57.69) but incorrectly rounded.
		Total 35	

To scale isosceles triangle (2 sides 65mm, angle between = 52°)