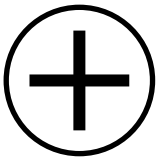
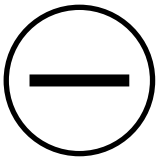
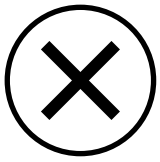
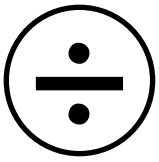
Key Stage 2

Mathematics

Reasoning: Pack 1 Test 1b

Name	
Date	

/ 33
total marks

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Name: Date:

33 total marks

Key Stage 2 Maths Reasoning: Pack 1 Test 1b

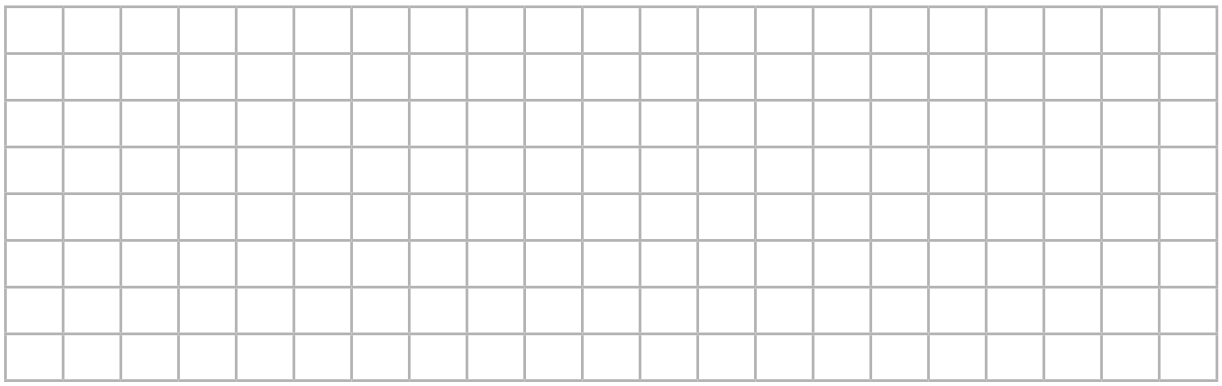
1) Order the following from smallest to largest:

$\frac{7}{4}$ $\frac{8}{5}$ $\frac{3}{2}$

Smallest ☐ ☐ ☐ **Largest**

1 mark

2) 35% of the 20 children in a class are boys. How many boys are there in the class?



Answer: ☐

1 mark

3) The sequence 4, 7, 10, 13, 16,... can be expressed as 3n+1, where n is the term.

a) Express the sequence 6, 10, 14, 18,... where n is the term:

Answer: ☐

1 mark

b) What is the 10th term?

Answer: ☐

1 mark

Total for this page

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4) A small bottle of lemonade is 2/3 the size of the large bottle. The small bottle costs 80p and the large bottle costs £1.15. If the same volume of lemonade is purchased, Amir argues that it is cheaper to buy large bottles rather than small bottles. Explain fully why Amir is correct:

2 marks

5) In the number 348 902.53, in what place are the digits 3?

Answer:

Answer:

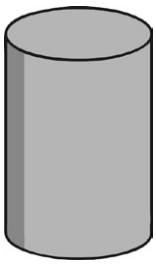
2 marks

6) Write the number 532 in Roman numerals:

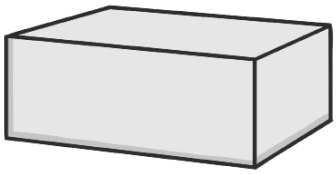
Answer:

1 mark

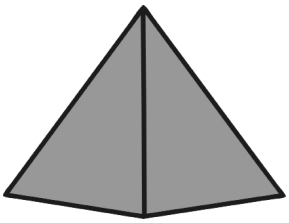
7) Write the labels for the following shapes in the Carroll Diagram:



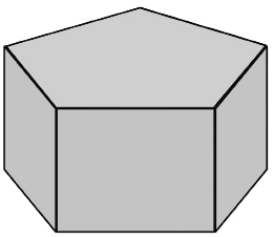
A



B



C



D

	Has 6 or more vertices	Has less than 6 vertices
Has at least one curved face		
Has no curved faces		

2 marks

Total for this page

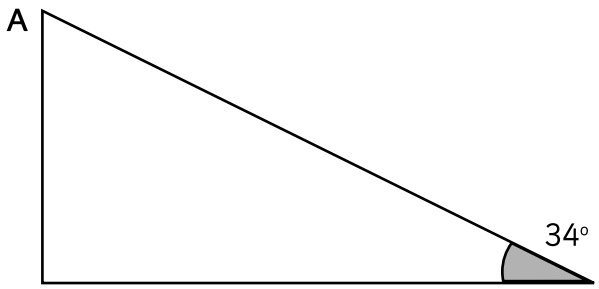
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8) A school takes delivery of some boxes of balls. In each box there are 5 red balls and 3 blue balls. In the whole delivery there are 40 red balls. How many balls are there altogether?

Answer:

2 marks

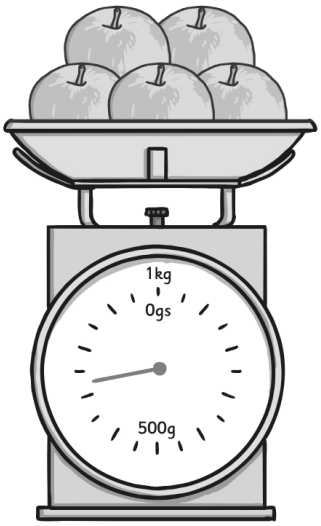
9) Calculate the size of angle A in this right angle triangle.



Angle A:

1 mark

10) How heavy are the apples on these scales?



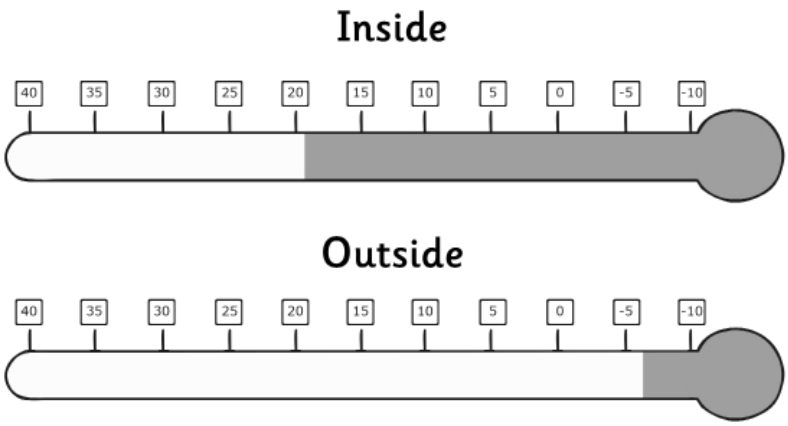
Answer: kg

1 mark

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11) These thermometers show the temperature inside and outside of a school at 9am.



a) What is the inside and outside temperature?

Inside: _____ **Outside:** _____

1 mark

b) What is the difference in temperature between the inside and the outside?

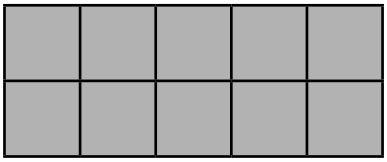
Answer: _____

1 mark

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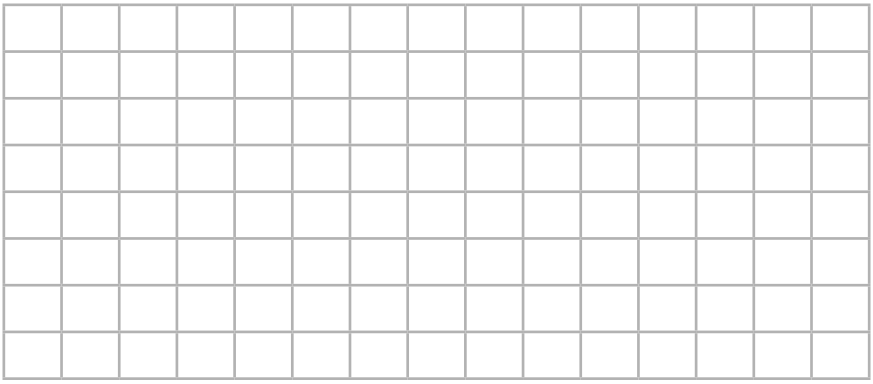
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12) Here is a rectangle:



A new rectangle is drawn, which is twice the length and twice the width of the original rectangle.

a) Draw the new rectangle:



1 mark

Jack says that the area of the new rectangle will be twice the area of the original.

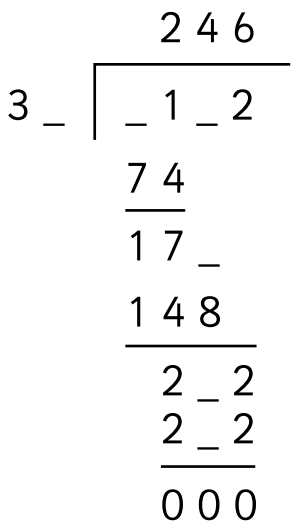
b) Explain why Jack is **not** correct:

1 mark

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13) Complete this division calculation by filling in the missing numbers:



2 marks

14) A supermarket sells packs of 6 cans of lemonade. Each can contains 330ml of lemonade.

How many litres of lemonade is there in a pack of 6 cans?

Answer: _____ l

1 mark

Total for this page

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15) Here is a bus timetable:

Darlington - Sunderland	**via Newton Aycliffe, Ferryhill Service 217**				
Sunday					
DARLINGTON, Bus Station	19:40	20:40	21:40	...	22:40
Aycliffe Village, North Briton	19:55	20:55	21:55	...	22:55
Newton Aycliffe, Stephenson Way/Pease Way	20:03	21:03	22:03	...	23:03
Greenfield Way, Labour Club	20:06	21:06	22:06	...	...
Rushyford, Eden Arms	20:11	21:11	22:11	...	23:16
Chilton, Wheatsheaf	20:13	21:13	22:13	...	23:18
Ferryhill Village, Bus Station	20:19	21:19	22:19	22:49	23:24
Wood Lane Estate, Shops	20:22	21:22	22:22	22:52	...
West Cornforth, Market Place	20:31	21:31	22:31	23:01	...
Coxhoe, Police Station	...	21:39	...	23:09	...
Bowburn, Garage	...	21:44	...	23:14	...
Sherburn Village, Grey Horse	...	21:54	...	...	...
Pittington, Cross Roads	...	21:59	...	...	...
West Rainton	...	22:06	...	...	...
Houghton-le-Spring, Bus Station	...	22:13	...	...	...
SUNDERLAND, Park Lane Bus Station	...	22:29	...	...	...

a) Find the last direct bus from Newton Aycliffe to Bowburn. When does it leave Darlington?

Answer:

1 mark

b) How long does the last bus from Darlington to Chilton take?

Answer:

1 mark

Total for this page

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16) Here is the number of goals scored by the top 8 teams in the Premier League during the season 2014-15:

Chelsea	73
Manchester City	83
Arsenal	71
Manchester United	62
Tottenham Hotspur	58
Liverpool	48
Southampton	54
Swansea	46

What is the mean number of goals scored by these teams?

Answer:

2 marks

17) Write the number six hundred and nine thousand, two hundred and seventeen in numbers.

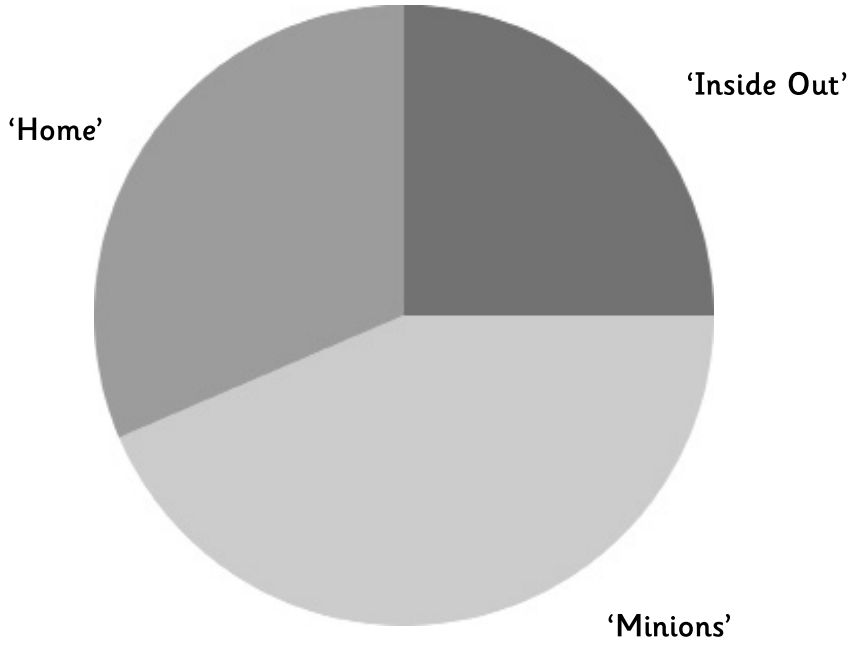
Answer:

1 mark

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18) Here is a pie chart representing the number of people who saw the 3 most popular films at a cinema on a given Saturday:



If 340 people watched 'Inside Out', estimate how many people watched 'Minions':

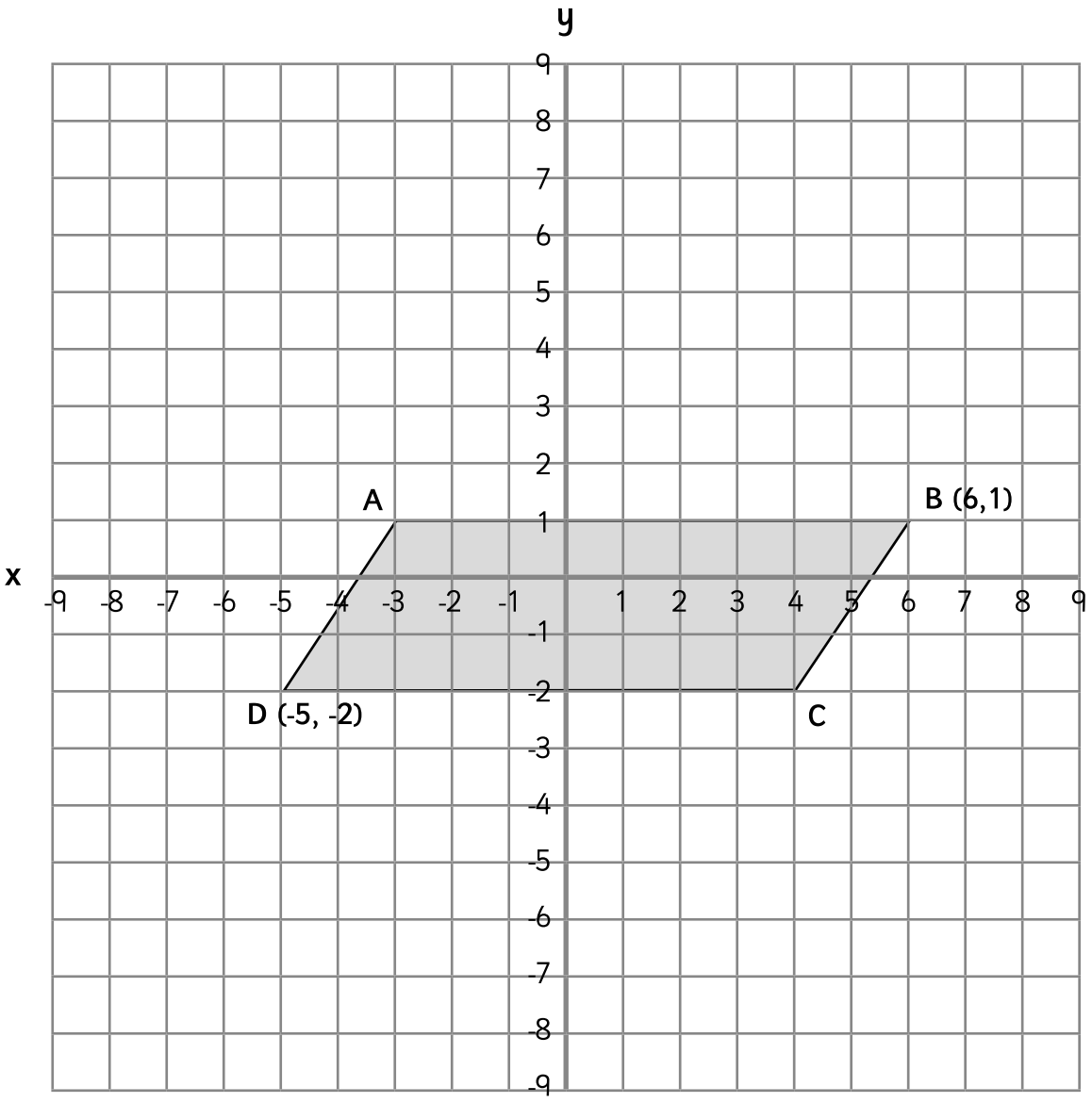
Answer:

1 mark

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19) A parallelogram is drawn on this grid:



Write the coordinates for corners A and C:

A: (,) C: (,)

2 marks

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20) A school orders 26 packs of pencils. Each pack contains 12 boxes of 12 pencils. The pencils are to be shared equally among the 14 classes in the school. To the nearest whole number, how many pencils will each class be given?

Answer:

3 marks

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Answer Sheet: Key Stage 2 Maths Reasoning - Pack 1 Test 1b

<table>
<tr><th>question</th><th>answer</th><th>marks</th><th>notes</th></tr>
<tr><td colspan="4">1.</td></tr>
<tr><td></td><td>$\frac{3}{2}$ $\frac{8}{5}$ $\frac{7}{4}$</td><td>1</td><td></td></tr>
<tr><td colspan="4">2.</td></tr>
<tr><td></td><td>7</td><td>1</td><td></td></tr>
<tr><td colspan="4">3.</td></tr>
<tr><td>a</td><td>4n+2</td><td>1</td><td></td></tr>
<tr><td>b</td><td>42</td><td>1</td><td>1 mark if correct answer based on answer to 3a</td></tr>
<tr><td colspan="4">4.</td></tr>
<tr><td></td><td>Any answer that explains that $\frac{2}{3}$ of £1.15 is 76.6p, which is less than 80p, or 80p is $\frac{2}{3}$ of £1.20 gains 2 marks.</td><td>2</td><td>1 mark for stating 2/3 of £1.15 is less than 80p but without calculating it as 76.6p.</td></tr>
<tr><td colspan="4">5.</td></tr>
<tr><td></td><td>Hundred thousands
Hundredths
or 100,000s and 0.01s</td><td>2</td><td>1 mark for one correct.</td></tr>
<tr><td colspan="4">6.</td></tr>
<tr><td></td><td>DXXXII</td><td>1</td><td></td></tr>
<tr><td colspan="4">7.</td></tr>
<tr><td></td><td><table><tr><th></th><th>Has 6 or more vertices</th><th>Has less than 6 vertices</th></tr><tr><td>Has at least one curved face</td><td></td><td>A</td></tr><tr><td>Has no curved faces</td><td>B D</td><td>C</td></tr></table></td><td>2</td><td>1 mark for 3 correct and no more than 1 incorrect</td></tr>
<tr><td colspan="4">8.</td></tr>
<tr><td></td><td>64 balls</td><td>2</td><td>1 mark for incorrect answer but only 1 mistake in calculation
1 mark for calculating 24 blue balls but not giving the total of 64.</td></tr>
</table>

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Answer Sheet: Key Stage 2 Maths Reasoning - Pack 1 Test 1b

question	answer	marks	notes
9.			
	56°	1	
10.			
	0.725kg or 725g	1	
11.			
a	19°C and -7°C	1	1 mark for correct calculation from incorrect temperature readings
b	26°C	1	
12.			
a	10 x 4 rectangle	1	1 mark is awarded for any explanation that shows why the area is not twice the original area.
b	The area is 4x the area of the original.	1	
13.			
	246 37) 9102 74 170 148 222 222 000	2	1 mark for 4 correct and 1 incorrect.
14.			
	1.98 litres	1	Do not accept 1980 ml or 1 litre 980 ml
15.			
a	2040	1	
b	38 minutes	1	
16.			
	61.875	2	1 mark for incorrect answer, but only 1 mistake in calculation.

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Answer Sheet: Key Stage 2 Maths Reasoning - Pack 1 Test 1b

question	answer	marks	notes
17.			
	609 217	1	
18.			
	520 - 570	1	
19.			
	A: (-3, 1) and C: (4, -2)	2	2 marks for both correct answers. Allow any answer where the x coordinates of A and C add to 1 and the y coordinates add to -1. 1 mark for having correct x coordinates or y coordinates.
20.			
	297 pencils	3	3 marks for correct answer rounded to 267. 2 marks for correct calculation but answer not rounded (267.428571) 1 mark for incorrect answer but correct calculation with 1 error. (26 x 12 x 12)/14
		Total 33	

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