

# Key Stage 2

## Mathematics Reasoning: Pack 3 Test 3b

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#### Key Stage 2 Maths Reasoning: Pack 3 Test 3b

1. A sports shop sells 4 different colour football shirts (blue, red, gold and white) and 3 different colour pairs of shorts (black, white and blue).

How many different combinations of football kit can be worn using these different shirts and shorts?

Image: Image:

### 1 mark

#### 2. Jaques is baking a cake.

He has measured out some plain flour on a set of scales. The reading is shown below. Jaques needs to add 80g of butter to the flour on the scales.

Mark on the scales where the needle will be after Jaques has added 80g of butter.









3. Place the following numbers on the Venn diagram.



4. In this parallelogram, calculate the angle marked Y.



										(



1 mark

1 mark

13

5. Draw lines to match the equivalent decimal fractions, fractions and percentages.

One has been completed for you.



6. Complete this division calculation.





2 marks



**7.** In the London Olympics 2012, the gold, silver and bronze medals in the men's 100m sprint went to:

Medal	Athlete	Time
Gold	Usain Bolt	9.63
Silver	Yohan Blake	9.75
Bronze	Justin Gatlin	9.79

Calculate the time between gold and silver, then the time between silver and bronze. What is the difference between these two answers?







8. A school raises £746 at a charity event.

The money is shared equally amongst 8 local charities.

How much will each charity be given?









**9.** The drawing below is drawn to a scale of 1cm to 2m. Measure the drawing and calculate the area of the full-sized shape. 2 marks 10. Order the following numbers from the smallest to the largest. 696 996 966 969 969 699 966 699 696 699 1 mark largest smallest







#### 11. Translate the shape so that point A is translated to point B.

**12.**A dancer spends one hour and fifteen minutes altogether at her two dancing lessons; Street Dance and Tap Dance.

The lengths of the classes are at a ratio of 3:2.

How much longer is the Street Dance class than the Tap Dance class?







- **13.** The attendances in UK cinemas for the first 4 months of 2015 are displayed in the table below.
- **a)** Round each figure to the nearest 1 million.

Month	Attendance	Attendance rounded to the nearest million
January	15 586 610	
February	15 162 922	
March	11 544 674	
April	15 125 895	

**b)** Using the rounded figures, what is the mean average monthly total attendance in cinemas in the UK in the first 4 months of the year?

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#### 14. Continue this sequence:

26 978, 27 978, 28 978,



1 mark

l mark

15.Draw 2 lines that intersect at 32°.

16. Write the following number as a decimal fraction.



17.A gaming shop offers 24% discount to customers when 3 console games are bought. Jamie buys 3 console games costing £16, £19 and £25 before the discount is applied.

How much will the games cost altogether after the discount has been applied?

								4		

10







**18.**A group of children measured the height of all the children in Year 6.

The continuous data bar chart shows the results.



#### a) How many children measure less than 1.20m in height.



**b)** Work out the difference between the number of children who are 1.40m or taller and those that are less than 1.10m.





19. An ice cream van sells chocolate and vanilla ice cream.

In one week, three fifths of the 935 ice creams that are sold are chocolate.

How many chocolate ice creams were sold that week?







Sheffield		06:00	06:03	06:29		07:03	07:29
Chesterfield	05:42	06:13	06:19	06:40	07:01	07:20	07:41
Derby	06:04	06:33		07:05	07:21		08:01
Nottingham			07:01			07:57	
Leicester	06:39	07:06		07:36	07:56		08:24
London St Pancras	08:07	08:39		08:56	09:10		09:33

20. Here is a timetable for trains travelling from Sheffield to London St Pancras.

a) At what time does the quickest train to London depart from Sheffield?



- **b)** A passenger needs to travel from Sheffield to Nottingham, arriving before quarter to eight. What time should they depart from Sheffield?
- c) A passenger arrives at Chesterfield train station at quarter past 6. How long will they need to wait for the next train to depart to London?

13





#### 21.A pupil measures the temperature in his garden each morning.

The table below shows the temperatures in one week.

Sunday	5°C
Monday	2°C
Tuesday	0°C
Wednesday	0°C
Thursday	2°C
Friday	1°C
Saturday	4°C

#### What is the mean temperature?










question	answer	marks	notes			
1.						
	12 combinations (4x3)	1				
2.						
	190g.	1	1 mark for a reading shown just after 185g, but no more than 200g.			
3.						
	Prime numbers Factor of 45 7, 11, 13 5 9	1				
4.						
	57° or 57 degrees	1	degrees or ° must be written for the mark.			
5.						
	$\begin{array}{c} \frac{1}{2} \\ 3 \\ \frac{3}{4} \\ \frac{2}{5} \\ \frac{5}{8} \\ \frac{2}{3} \end{array} \begin{array}{c} 0.625 \\ 0.5 \\ 0.67 \\ 0.75 \\ 0.75 \\ 0.4 \end{array} \begin{array}{c} 40\% \\ 62.5\% \\ 67\% \\ 50\% \\ 2 \\ 75\% \end{array}$	2	2 marks for all 4 correct. 1 mark for 2 correct.			
6.						
	502 9[4 <b>5</b> 1 <b>8</b>	2	2 marks for all correct. 1 mark for 1 digit correct.			
7.						
	0.08 seconds (0.12 – 0.04)	2	2 marks for the correct answer. 1 mark for identifying the gap between gold and silver as 0.12 seconds and the gap between silver and bronze as 0.04 seconds.			
8.						
	£93.25	2	2 marks for the correct answer. 1 mark for a correct method with only one mistake in calculating.			

15



question	answer	marks	notes			
9.						
	112m <sup>2</sup>	2	2 marks for a correct answer. 1 mark for correctly identifying that the full size is 14m x 8m.			
10.						
	696 699, 696 996, 966 699, 966 969, 969 699	1				
11.		•				
		1				
12.						
	15 minutes	2	2 marks for the correct answer. 1 mark for a correct method with only one mistake in calculating.			
13.						
a	Month   Attendance   Attendance rounded to the nearest million     January   15 586 610   16 000 000     February   15 162 922   15 000 000     March   11 544 674   12 000 000     April   15 125 895   15 000 000	1	1 mark for all correct.			
b	14 500 000	1				
14.						
	29 978, 30 978, 31 978	1				





question	answer	marks	notes			
15.						
	32°	1				
16.						
	0.034	1				
17.						
	£45.60	2	2 marks for a correct answer 1 mark for incorrect answer with only 1 mistake in calculation			
18.						
а	28 children	1	allow 27 - 29			
b	7 children	2	2 marks for an answer from 6 to 8 inclusive. 1 mark for an answer of 5 or 9.			
19.						
	561	2	2 marks for the correct answer. 1 mark for a correct method with only one mistake in calculating.			
20.						
а	07:29	1				
b	06:03	1				
с	25 minutes	1				
21.						
	2°C	2	2 marks for the correct answer. 1 mark for a correct method in adding the temperatures and dividing the answer by 7, even if the calculation in incorrect.			
		Total 35				

