## THIRD SPACE

LEARNING

# Fractions, Decimals <br> and Percentages 

## SATs Question Pack

25 KS2 SATs Questions and Mark Scheme: Fractions,
Decimals and Percentages

Year 6

Name:
School:
$\qquad$ Class:

Score: $\qquad$

## Instructions

You may not use a calculator to answer any questions in this test.

## Questions and answers

- Follow the instructions for each question.
- Work as quickly and as carefully as you can.
- If you need to do working out, you can use the space around the question.
- For these questions, you may get a mark for showing your method.
- If you cannot do a question, go on to the next one.
- You can come back to it later, if you have time.
- If you finish before the end, go back and check your work.


## Marks

- The number under each line at the side of the page tells you the maximum number of marks for each question.

1 What fraction of the shape is shaded?


1 mark

2 Shade in $\frac{2}{3}$ of this pattern.



1 mark

3 Write the missing numbers on the number line.



1 mark

4 Write this fraction in its simplest form. $\frac{42}{56}$


1 mark

## Key Stage 2 SATs Questions | Fractions, Decimals and Percentage

5 Write this improper fraction as a mixed number (in the simplest form). $\frac{27}{6}$



1 mark

6 Find an equivalent fractions to represent $\frac{5}{6}$ as thirtieths.


7 Put these fractions in descending order:
$1 \frac{3}{6}$
$1 \frac{2}{3}$
$1 \frac{3}{4}$


1 mark
$8 \frac{9}{15}+\frac{4}{15}=$


## Key Stage 2 SATs Questions | Fractions, Decimals and Percentage

9 Find $\frac{3}{10}$ of 360 ml .



1 mark
$10 \frac{2}{3} \times 6=$


11 Frankie has $\frac{7}{8}$ of a pizza left. Perry eats $\frac{5}{8}$ of the pizza.
How much pizza has Frankie got now?


12 Write 0.16 as a fraction.


## Key Stage 2 SATs Questions | Fractions, Decimals and Percentage

$13 \frac{4}{9}+\frac{2}{3}=$

$147.63 \times 8=$


15 Circle three numbers that add up to 1.

$$
\begin{array}{llllll}
\frac{1}{4} & 0.5 & 10 \% & \frac{7}{10} & 15 \% & 0.2
\end{array}
$$



1 mark

16 Find $35 \%$ of 780 kg .



1 mark
$17 \quad \frac{7}{3} \times \frac{9}{14}=$


18 Look at this scaled drawing of a school playground

a What percentage of the playground is field space?



1 mark
b How much of the playground does the netball courts take up? Write your answers as a fraction.

c What amount of playground is taken up by the climbing frame? Write your answer as a decimal.


1 mark
$193 \frac{2}{3}-1 \frac{3}{4}=$


1 mark

20 There are 31 children in the class. Tia says, " $40 \%$ of the class are boys." Is this possible? Why? Why not?



1 mark
$21 \frac{3}{7} \div 5=$



1 mark

22 At the sweet factory, 3600 sweets are made each hour. $\frac{5}{9}$ of the sweets are lollipops. $20 \%$ of the sweets are gummy bears and the rest is chocolate bars. How many chocolate bars are manufactured each hour?


1 mark

23 During a sale, prices were reduced by $20 \%$. If Jack paid $£ 132$ for a new phone, what was the price of the phone before the sale?


1 mark

24 The population of the UK is 65.215 million. The population of USA is 5 times this size. What is the population of the USA? Round your answers to 2 decimal places.


1 mark

25 Pippa had some money. She spent $\frac{1}{3}$ of it on a new pencil case. She then spent $\frac{1}{2}$ of what she had left on a new set of pens. Her pens cost her $£ 18$. How much money did Pippa have to start with?


1 mark

Key Stage 2 SATs Mark Scheme | Fractions, Decimals and Percentage

## Mark Scheme

The instructions and principles of this mark scheme closely follow the guidance in the 2016 national curriculum tests.
We have deliberately not set a limited time for the test paper as a teacher may want to very it according to the standard individual children are working at.

The national curriculum test allows 40 minutes to complete this test.

## Key Stage 2 SATs Mark Scheme | Fractions, Decimals and Percentage

## Answers

| Question Number | Requirement | Mark | Acceptable answer or additional guidance | Content <br> Domain Ref | NC strand |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $\frac{1}{4}$ | 1 m | Accept $\frac{1}{4}$ or equivalent | 4F2 | Fractions |
| 2 | Any 8 hexagons shaded in | 1 m |  | 3F2 | Fractions |
| 3 | Both answers are needed to obtain one mark | 1 m | Accept equivalent of $\frac{3}{4}$ | 5 F 3 | Fractions |
| 4 | $\frac{3}{4}$ | 1 m | Do Not Accept $\frac{6}{8}$ | 6F2 | Fractions |
| 5 | $4 \frac{1}{2}$ | 1 m | Do Not Accept 4 $\frac{3}{6}$ | 5F2a | Fractions |
| 6 | $\frac{25}{30}$ | 1 m |  | 6F2 | Fractions |
| 7 | $\frac{3}{4}$ | 1 m |  | 6F3 | Fractions |

## Key Stage 2 SATs Mark Scheme | Fractions, Decimals and Percentage

| Question <br> Number | Requirement | Mark | Acceptable answer or additional guidance | Content <br> Domain Ref | NC strand |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | $\frac{13}{15}$ | 1 m | Accept equivalence | 5F4 | Fractions |
| 9 | 1,108ml | 1 m |  | 4F10a | Fractions |
| 10 | 4 | 1 m | Accept $\frac{4}{1}$ | 5F5 | Fractions |
| 11 | $\frac{2}{8}$ | 1 m | Accept equivalence | 3F10 | Fractions |
| 12 | $\frac{16}{10}$ | 1 m | Accept $\frac{4}{25}$ | 5F6a | Fractions |
| 13 | $\frac{10}{9}$ | 1 m | Accept 1 $\frac{1}{9}$ | 6F4 | Fractions |
| 14 | 61.04 | 1 m |  | 6F9b | Fractions |
| 15 | Circled in any order $\begin{array}{llll} 10 & \frac{3}{2} & 0.2 \end{array}$ | 1 m | Do Not Accept if more than three numbers are circled | 6F11 | Fractions |
| 16 | 273 kg | 1 m |  | 6R2 | Ratio |
| 17 | $\frac{3}{2}$ | 1 m | Accept 1 $\frac{1}{2}$ | 5Fa | Fractions |
| 18a | 40\% | 1 m | Do Not Accept fraction or decimal equivalents | 5F11 | Fractions |
| 18b | $\frac{3}{10} \text { or } \frac{30}{100}$ | 1 m | Do Not Accept fraction or decimal equivalents | 5Fa | Fractions |

## Key Stage 2 SATs Mark Scheme | Fractions, Decimals and Percentage

| Question Number | Requirement | Mark | Acceptable answer or additional guidance | Content Domain Ref | NC strand |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 18c | 0.1 | 1 m | Do Not Accept fraction or percentage equivalents | 5F11 | Fractions |
| 19 | $1 \frac{11}{12}$ | 1 m | Accept $\frac{23}{12}$ | 6F4 | Fractions |
| 20 | Not possible as $40 \%$ of 31 is 12.4 and you cannot not have 12.4 children who are boys. | 1 m | Accept similar explanations | 5F12 | Fractions |
| 21 | $\frac{3}{35}$ | 1 m |  | 6F5b | Fractions |
| 22 | 880 chocolate bars | 1 m |  | 6R2/4F10a | Ratio/Fractions |
| 23 | £165 | 1 m | Do Not Accept $£ 165$ p | 5F12 | Fractions |
| 24 | 326.08 | 1 m |  | 5F10/6F10 | Fractions |
| 25 | Award two marks for the correct answer of $£ 54$ <br> If answer is incorrect, award one mark for evidence of an appropriate method with no more than one arithmetic error e.g. $\begin{aligned} & \frac{2}{6}=£ 18 \\ & 18 \times 3=£ 52 \text { (error) } \end{aligned}$ | Up to 2m | Answer need not be obtained for the award of one mark. | 6R4 | Ratio |

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