THIRD SPACE LEARNING

# Fractions, Decimals and Percentages SATs Question Pack

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

Year 6

Name: ..... Class: .....

School: ..... Score: .....

# Instructions

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

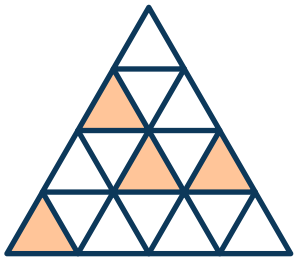
**Questions and answers**

- 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**

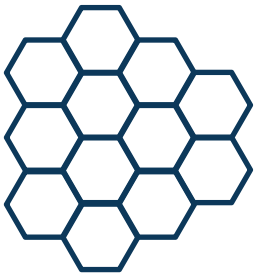
- The number under each line at the side of the page tells you the maximum number of marks for each question.

**1** What fraction of the shape is shaded?



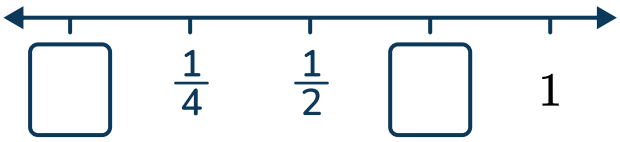
1 mark

**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

**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.

1 mark

**7** Put these fractions in descending order:

$1\frac{3}{6}$ $1\frac{1}{12}$ $1\frac{2}{3}$ $1\frac{3}{4}$

1 mark

**8** $\frac{9}{15} + \frac{4}{15} =$

1 mark

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

1 mark

**10** $\frac{2}{3} \times 6 =$

1 mark

**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?

1 mark

**12** Write 0.16 as a fraction.

1 mark

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

1 mark

**14** 7.63 x 8 =

1 mark

**15** Circle **three** numbers that add up to 1.

$\frac{1}{4}$ 0.5 10% $\frac{7}{10}$ 15% 0.2

1 mark

**16** Find 35% of 780kg.

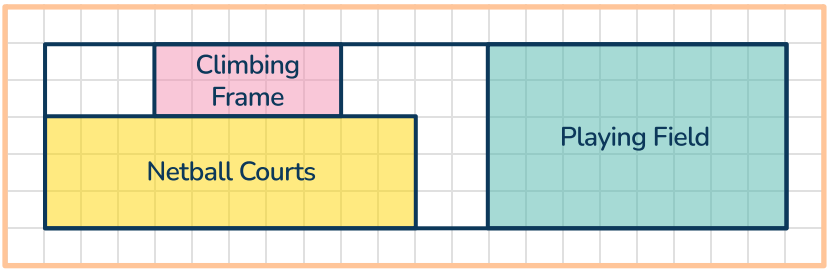
1 mark

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

1 mark

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.

1 mark

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

1 mark

**19** $3\frac{2}{3} - 1\frac{3}{4} =$

—

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

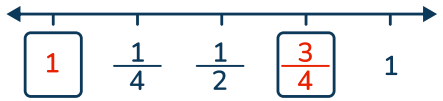
# Mark Scheme

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.

# Answers

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

| Question Number | Requirement | Mark | Acceptable answer or additional guidance | Content Domain Ref | NC strand |
|---|---|---|---|---|---|
| 8 | $\frac{13}{15}$ | 1m | **Accept** equivalence | 5F4 | Fractions |
| 9 | 108ml | 1m | | 4F10a | Fractions |
| 10 | 4 | 1m | **Accept** $\frac{4}{1}$ | 5F5 | Fractions |
| 11 | $\frac{2}{8}$ | 1m | **Accept** equivalence | 3F10 | Fractions |
| 12 | $\frac{16}{100}$ | 1m | **Accept** $\frac{4}{25}$ | 5F6a | Fractions |
| 13 | $\frac{10}{9}$ | 1m | **Accept** $1\frac{1}{9}$ | 6F4 | Fractions |
| 14 | 61.04 | 1m | | 6F9b | Fractions |
| 15 | Circled in any order<br>2 $\frac{7}{10}$ % | 1m | **Do Not Accept** if more than three numbers are circled | 6F11 | Fractions |
| 16 | 273kg | 1m | | 6R2 | Ratio |
| 17 | $\frac{3}{2}$ | 1m | **Accept** $1\frac{1}{2}$ | 5Fa | Fractions |
| 18a | 40% | 1m | **Do Not Accept** fraction or decimal equivalents | 5F11 | Fractions |
| 18b | $\frac{3}{10}$ or $\frac{30}{100}$ | 1m | **Do Not Accept** fraction or decimal equivalents | 5Fa | Fractions |

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

## Do you have a group of pupils who need a boost in maths this term?

Each pupil could receive a personalised lesson every week from our specialist 1-to-1 maths tutors.

- Raise attainment
- Address learning gaps or misconceptions
- Boost confidence

## Speak to us


thirdspacelearning.com

0203 771 0095

hello@thirdspacelearning.com


THIRD SPACE LEARNING