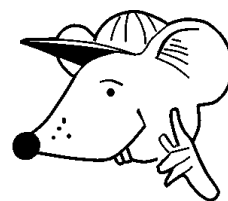




MATHEMATICS



N.S. Yr. 6 P.25

Find fractions of numbers or quantities.

Equipment

Paper, pencil, ruler

MathSphere

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Concepts

Following on from previous work on fractions, children should now be confident when working with fractions with different denominators and should understand the relationship between familiar fractions of different sizes, for example that three quarters is more than two thirds, but less than seven eighths. They should be able to put simple fractions such as $\frac{3}{10}$, $\frac{4}{5}$ and $\frac{5}{6}$ on a number line. By putting numbers on a number line they should be able to see which is the largest or smallest of a group of fractions and put a group of fractions in order of size.

They should be able to say how many of one simple fraction there are in another fraction, e.g. 'How many thirds are there in two and two thirds?'

Multiples of simple fractions

Pupils should be able to find multiples of a simple fraction of a familiar quantity such as **three tenths** of **30** or **100** or **500** and **five sixths** of **48** or **240**.

They should be able to find multiples of a simple fraction of £1 and one metre such as four fifths of a pound and three quarters of a metre. They should be able to find thousandths of kilometres, kilograms and litres.

E.g. Find $\frac{340}{1000}$ of a kilogram. One thousandth of a kilogram is one gram, so $\frac{340}{1000}$ of a kilogram is 340 grams.

Watch out for the division sums. Don't forget fractions are really division sums in disguise!



1. Four Maths Rats shared seven Twinkle Chocolate Bars between them. How many bars did they have each? No remainders, please, Maths Rats do not waste chocolate!
2. Seven children refreshed themselves with four litres of lemonade. They had the same amount each. How much did they have each?
3. A bus travelled eight miles in three hours. What was its average speed? Give your answer as a mixed number.
4. Car factory produces seventy cars in six hours. How many is that each hour? Give your answer as a mixed number?
5. An oil tank is filled with 200 litres of oil in 30 seconds. How many litres of oil per second goes into the tank? Give your answer as a mixed number.
6. Ten machines made 100 tonnes of sugar in eight hours. What was the average number of tonnes of sugar made by each machine in one hour? Careful now!
7. Mrs Smith's family has the following number of cartons of milk on each day of the week. What was the average number of cartons per day?

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4	5	3	3	4	4	3

1.

When you are doing these questions, think carefully about how many parts make one whole.



- a) How many **thirds** are there in **one whole one**?
- b) How many **fifths** are there in **one whole one**?
- c) How many **tenths** are there in **one whole one**?
- d) How many **sevenths** are there in **one whole one**?
- e) How many **sixteenths** are there in **one whole one**?
- f) How many **halves** are there in **one whole one**?
- g) How many **thirtieths** are there in **one whole one**?
- h) How many **hundredths** are there in **one whole one**?
- i) How many **halves** are there in **three and a half**?
- j) How many **quarters** are there in **four and three quarters**?
- k) How many **sixths** are there in **two whole ones**?
- l) How many **tenths** are there in **five and a half**?
- m) How many **thirds** are there in **one and two thirds**?
- n) How many **fifths** are there in **ten whole ones**?
- o) How many **thousands** are there in **four and a half**?
- p) How many **hundredths** are there in **one and a quarter**?

1.

This is very important practice. Can you do the whole page without making a mistake?



- a) How many **fifths** are there in **one whole one**?
- b) How many **twentieths** are there in **one whole one**?
- c) How many **thousandths** are there in **one whole one**?
- d) How many **ninetieths** are there in **one whole one**?
- e) How many **fortieths** are there in **one whole one**?
- f) How many **two hundredths** are there in **one whole one**?
- g) How many **thousandths** are there in **three whole ones**?
- h) How many **hundredths** are there in **two and a half**?
- i) How many **sixteenths** are there in **two and a quarter**?
- j) How many **thirds** are there in **five and two thirds**?
- k) How many **tenths** are there in **four and six tenths**?
- l) How many **elevenths** are there in **nine**?
- m) How many **fiftieths** are there in **two and a half**?
- n) How many **sevenths** are there in **eleven whole ones**?
- o) How many **thousandths** are there in **three and a quarter**?
- p) How many **quarters** are there in **one hundred**?

1. What is **four fifths** of these numbers?

a) 15 b) 25 c) 50 d) 55 e) 80 f) 200 g) 550

2. What is **seven tenths** of these numbers?

a) 40 b) 90 c) 100 d) 140 e) 950 f) 340 g) 260

3. What is **eight hundredths** of these numbers?

a) 100 b) 600 c) 1 000 d) 4 500 e) 700 f) 3 500 g) 500

4. What is **one sixth** of these numbers?

a) 36 b) 66 c) 90 d) 240 e) 312 f) 42 g) 366

5. What is **five sixths** of these numbers?

a) 12 b) 48 c) 72 d) 30 e) 480 f) 666 g) 1 200

6. What is **three sevenths** of these numbers?

a) 28 b) 49 c) 21 d) 84 e) 105 f) 210 g) 280

7. What is **two thirds** of these numbers?

a) 42 b) 72 c) 120 d) 600 e) 630 f) 135 g) 990

8. What is **nine tenths** of these numbers?

a) 370 b) 940 c) 360 d) 280 e) 390 f) 2 000 g) 900

9. What is **seven hundredths** of these numbers?

a) 1 000 b) 900 c) 1 300 d) 4 400 e) 800 f) 3 600 g) 400

10. What is **five eighths** of these numbers?

a) 24 b) 80 c) 32 d) 800 e) 880 f) 440 g) 240

1. Write these fractions to the **nearest whole number**.

a) $12\frac{6}{7}$ b) $18\frac{15}{21}$ c) $7\frac{3}{10}$ d) $18\frac{4}{5}$ e) $\frac{2}{7}$ f) $13\frac{1}{6}$

2. Write these fractions to the **nearest whole number**.

a) $18\frac{11}{100}$ b) $99\frac{91}{100}$ c) $21\frac{7}{9}$ d) $98\frac{3}{7}$ e) $15\frac{35}{60}$ f) $36\frac{8}{30}$

3. What fraction of one kilometre is 376 metres?

4. What fraction of one kilogramme is 839 grammes?

5. What fraction of one litre is 372 millilitres?

6. What fraction of one day is half an hour?

7. What fraction of one day is twenty hours?

8. What fraction of one day is sixteen hours?

9. What fraction of one week is three and a half days?

10. What fraction of one book of 455 pages is one chapter of 75 pages?

11. I have thirteen books on a shelf. Six of them have blue covers. What fraction do **not** have blue covers?

12. What fraction of 1 Kg is 270g ?

13. What fraction of 1 litre is 545 ml?

14. What fraction of one non-leap year is the month of April?

15. What fraction of a day is the time from 1345 to 1615?

1. Write these fractions to the **nearest whole number**.

a) $25\frac{8}{11}$ b) $32\frac{3}{8}$ c) $12\frac{5}{6}$ d) $92\frac{3}{11}$ e) $3\frac{9}{100}$ f) $\frac{5}{11}$

2. Write these fractions to the **nearest whole number**.

a) $93\frac{3}{10}$ b) $26\frac{1}{3}$ c) $32\frac{5}{7}$ d) $14\frac{23}{24}$ e) $22\frac{13}{27}$ f) $3\frac{5}{8}$

3. What fraction of one kilometre is 546 metres?

4. What fraction of one kilogramme is 132 grammes?

5. What fraction of one litre is 888 millilitres?

6. What fraction of one day is one quarter of an hour?

7. What fraction of one day is seventeen hours?

8. What fraction of one day is nine hours?

9. What fraction of one week is one hundred hours?

10. What fraction of one book of 650 pages is one chapter of 50 pages?

11. I have sixteen rabbits. Seven of them are long haired varieties. What fraction are **not** long haired varieties?

12. What fraction of 1 Kg is 650g ?

13. What fraction of 1 litre is 333 ml?

14. What fraction of one non-leap year is the period from 1st March to 30th June, inclusive?

15. What fraction of a day is the time from 0800 to 1230?

Answers**Page 3**

1. $\frac{7}{4} = 1\frac{3}{4}$ bars 2. $\frac{4}{7} 1$ 3. $\frac{8}{3} = 2\frac{2}{3}$ mph
 4. $\frac{70}{6} = 11\frac{4}{6} = 11\frac{2}{3}$ cars
 5. $\frac{200}{30} = 6\frac{20}{30} = 6\frac{2}{3} 1$ 6. $\frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4}$ tonnes
 7. Total cartons = 26 Average = $\frac{26}{7} = 3\frac{5}{7}$ cartons per day.

Page 4

1. a) 3 b) 5 c) 10 d) 7 e) 16 f) 2 g) 30 h) 100
 i) 7 j) 19 k) 12 l) 55 m) 5 n) 50 o) 4 500 p) 125

Page 5

1. a) 5 b) 20 c) 1 000 d) 90 e) 40 f) 200 g) 3 000 h) 250
 i) 36 j) 17 k) 46 l) 99 m) 125 n) 77 o) 3 250 p) 400

Page 6

1. a) 12 b) 20 c) 40 d) 44 e) 64 f) 160 g) 440
 2. a) 28 b) 63 c) 70 d) 98 e) 665 f) 238 g) 182
 3. a) 8 b) 48 c) 80 d) 360 e) 56 f) 280 g) 40
 4. a) 6 b) 11 c) 15 d) 40 e) 52 f) 7 g) 61
 5. a) 10 b) 40 c) 60 d) 25 e) 400 f) 555 g) 1 000
 6. a) 12 b) 21 c) 9 d) 36 e) 45 f) 90 g) 120
 7. a) 28 b) 48 c) 80 d) 400 e) 420 f) 90 g) 660
 8. a) 333 b) 846 c) 324 d) 252 e) 351 f) 1 800 g) 810
 9. a) 70 b) 63 c) 91 d) 308 e) 56 f) 252 g) 28
 10. a) 15 b) 50 c) 20 d) 500 e) 550 f) 275 g) 150

Page 7

1. a) 13 b) 19 c) 7 d) 19 e) 0 f) 13
 2. a) 18 b) 100 c) 22 d) 98 e) 16 f) 36
 3. $\frac{376}{1\,000} = \frac{47}{125}$ 4. $\frac{839}{1\,000}$ 5. $\frac{372}{1\,000} = \frac{93}{250}$ 6. $\frac{1}{48}$
 7. $\frac{20}{24} = \frac{5}{6}$ 8. $\frac{16}{24} = \frac{2}{3}$ 9. $\frac{1}{2}$ 10. $\frac{75}{455} = \frac{15}{91}$
 11. $\frac{7}{13}$ 12. $\frac{270}{1\,000} = \frac{27}{100}$ 13. $\frac{545}{1\,000} = \frac{109}{200}$ 14. $\frac{30}{365} = \frac{6}{73}$
 15. $\frac{5}{48}$

Page 8

1. a) 26 b) 32 c) 13 d) 92 e) 3 f) 0
 2. a) 93 b) 26 c) 33 d) 15 e) 22 f) 4
 3. $\frac{546}{1\,000} = \frac{273}{500}$ 4. $\frac{132}{1\,000} = \frac{33}{250}$ 5. $\frac{888}{1\,000} = \frac{111}{125}$ 6. $\frac{1}{96}$
 7. $\frac{17}{24}$ 8. $\frac{9}{24} = \frac{3}{8}$ 9. $\frac{100}{168} = \frac{25}{42}$ 10. $\frac{50}{650} = \frac{1}{13}$
 11. $\frac{9}{16}$ 12. $\frac{650}{1\,000} = \frac{13}{20}$ 13. $\frac{333}{1\,000}$ 14. $\frac{122}{365}$
 15. $\frac{9}{48}$