

Homework/Extension

Step 2: Ratio and Fractions

National Curriculum Objectives:

Mathematics Year 6: (6R1) [Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts](#)

Mathematics Year 6: (6R4) [Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Draw sets of objects based on given fractions. 2 groups of objects in each set, grouped together, and a pictorial example given.

Expected Draw sets of objects based on given fractions. 3 groups of objects in each set, grouped together, and a pictorial example given.

Greater Depth Draw sets of objects based on given fractions. 3 groups of objects in each set, arranged randomly, and a pictorial example given.

Questions 2, 5 and 8 (Varied Fluency)

Developing Tick the options that do not correctly show the fraction or ratio given. 2 groups of objects in each set, grouped together, and pictorial support given.

Expected Tick the options that do not correctly show the fraction or ratio given. 2 or 3 groups of objects in each set, grouped together, and pictorial support given.

Greater Depth Tick the options that do not correctly show the fraction or ratio given. 3 groups of objects in each set, arranged randomly, and pictorial support given.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Identify and explain who is right based on two ratio and fraction statements about a set of coins. 2 different coins in the set and pictorial support given.

Expected Identify and explain who is right based on two statements about a set of coins. 3 different coins in the set and pictorial support given.

Greater Depth Identify and explain who is right based on two statements about a set of coins. 3 different coins in the set.

More [Year 6 Ratio](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Ratio and Fractions

1. Draw the sets below using the fractions given. The first one has been done for you.

A. $\frac{6}{8}$ circles

B. $\frac{3}{8}$ circles

C. $\frac{4}{6}$ stars



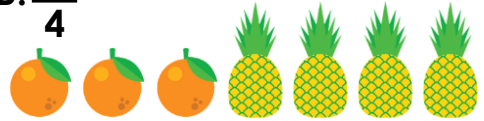
VF
HW/Ext

2. Tick the options that do not correctly show the ratio or fraction as a pictorial representation.

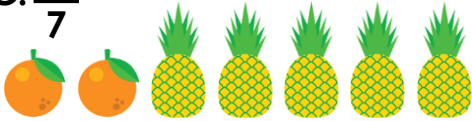
A. 2:3



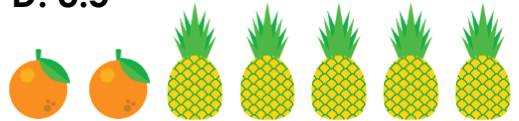
B. $\frac{3}{4}$



C. $\frac{2}{7}$



D. 3:5



VF
HW/Ext

3. Sam has a bag of 1p and 2p coins.

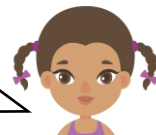


Sam says,



$\frac{3}{8}$ of the coins are 2p coins.

There are three 2p coins for every eight 1p coins.



Niamh says,

Who is correct? Explain how you know.



RPS
HW/Ext

Ratio and Fractions

4. Draw the sets below using the fractions given. The first one has been done for you.

A. $\frac{4}{9}$ rectangles

B. $\frac{1}{8}$ circles

C. $\frac{5}{13}$ triangles

A.



B.



C.



VF
HW/Ext

5. Tick the options that do not correctly show the ratio or fraction as a pictorial representation.

A. 1:4



B. $\frac{2}{3}$



C. $\frac{1}{5}$



B. 3:2:1



VF
HW/Ext

6. Millie has a bag of 5p, 10p and 20p coins.



Millie says,



There would be fourteen 5p coins for every four 10p coins and two 20p coins.

$\frac{2}{8}$ of the coins are 10p coins.



Jaxon says,

Who is correct? Explain how you know.



RPS
HW/Ext

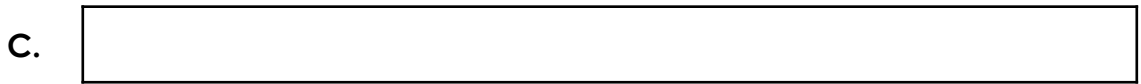
Ratio and Fractions

7. Draw the sets below using the fractions given. The first one has been done for you.

A. $\frac{5}{16}$ squares

B. $\frac{9}{15}$ circles

C. $\frac{3}{14}$ triangles



VF
HW/Ext

8. Tick the options that do not correctly show the ratio or fraction as a pictorial representation.

A. 2:4:3



B. $\frac{3}{15}$



C. $\frac{1}{3}$



D. 1:5:4



VF
HW/Ext

9. Benji has a bag of 5p, 10p and 20p coins. The total value of the coins is £1.



Benji says,



$\frac{1}{2}$ of the total is made of 20p coins.

There are two 10p coins and two 5p coins for every one 20p coin.



Gail says,

Who is correct? Explain how you know.



RPS
HW/Ext

Homework/Extension

Ratio and Fractions

Developing

1. B. Three circles and five stars drawn; C. Two circles and four stars drawn.
2. B and D
3. Sam is correct because there are eight coins in total and three are 2p coins. Niamh is incorrect because there are three 2p coins to every five 1p coins, not three 2p coins every eight 1p coins.

Expected

4. B. Various answers, but 1 circle out of 8 shapes must be drawn; C. Various answers, but 5 triangles out of 13 shapes must be drawn.
5. A and C
6. Millie is correct because there are seven 5p coins for every two 10p coins and one 20p coin so if that were doubled, there would be fourteen 5p coins for every four 10p coins and two 20p coins. Jaxon is incorrect because the whole set is 10 coins, not 8 coins, so $\frac{2}{10}$ of the coins are 10p coins.

Greater Depth

7. B. Various answers, but 9 circles out of 15 shapes must be drawn; C. Various answers, but 3 triangles out of 14 shapes must be drawn.
8. A and B
9. Gail is correct because four 10p coins = 40p, four 5p coins = 20p, two 20p coins = 40p which has a total of £1. Benji is incorrect because £1 cannot be made where 20p is half of the number of coins used.