

Homework/Extension

Step 7: Decimals as Fractions

National Curriculum Objectives:

Mathematics Year 6: (6F6) [Associate a fraction with division and calculate decimal fraction equivalents \[for example, 0.375\] for a simple fraction \[for example, 3/8\]](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Identify the correct statements. Decimals presented as tenths and some require simplification into fifths or halves.

Expected Identify the correct statements. Decimals are presented as tenths and hundredths and require simplification.

Greater Depth Convert decimals into mixed numbers and use them to complete a statement correctly. Decimals are presented as tenths and hundredths and require simplification. Questions include mixed numbers.

Questions 2, 5 and 8 (Varied Fluency)

Developing Convert decimals to fractions and find those that meet the given criteria. Decimals presented as tenths and some require simplification into fifths or halves.

Expected Convert decimals to fractions and find those that meet the given criteria. Decimals are presented as tenths and hundredths and require simplification.

Greater Depth Complete two decimals in such a way that their fraction equivalents meet the given criteria. Decimals are presented as tenths and hundredths and require simplification. Questions include mixed numbers.

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

Developing Explain which statement about a decimal equivalent is correct. Decimals presented as tenths and some require simplification into fifths or halves.

Expected Explain which statement about a decimal equivalent is correct. Decimals are presented as tenths and hundredths and require simplification.

Greater Depth Explain which statement comparing two decimal equivalents is correct. Decimals are presented as tenths and hundredths and require simplification. Questions include mixed numbers.

More [Year 6 Decimals](#) resources.

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Decimals as Fractions

1. Tick the statements that are correct.

A. $0.2 = \frac{2}{5}$

B. $0.3 = \frac{3}{10}$

C. $0.5 = \frac{1}{2}$

D. $0.4 = \frac{2}{5}$



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2. Convert the decimals to find the fractions that, when written in their simplest form, have an even number as their numerator.

A.

B.

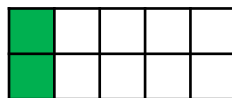
C.

D.



VF
HW/Ext

3. Haruko and Chiney are discussing converting decimals into fractions.



Haruko

0.2 as a fraction is $\frac{1}{2}$.



Chiney

0.2 as a fraction is $\frac{1}{5}$.

Who is correct? Explain your reasoning.



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Decimals as Fractions

4. Tick the statements that are correct.

A. $0.28 = \frac{7}{25}$

B. $0.06 = \frac{6}{10}$

C. $0.45 = \frac{9}{20}$

D. $0.37 = \frac{37}{100}$



VF
HW/Ext

5. Convert the decimals to find the fractions that, when written in their simplest form, have a prime number as their numerator.

A.

0.32

B.

0.05

C.

0.75

D.

0.55



VF
HW/Ext

6. Devin and Rhian are discussing converting decimals into fractions.

0.15



Devin

0.15 as a fraction is $\frac{15}{100}$.



Rhian

0.15 as a fraction is $\frac{3}{20}$.

Who is correct? Explain your reasoning.



RPS
HW/Ext

Decimals as Fractions

7. Convert the decimals below into mixed numbers in their simplest forms and complete the statement.

1.45

1.37

1.44

$$\begin{array}{|c|c|} \hline \square & \square \\ \hline \hline & 20 \\ \hline \end{array} > \begin{array}{|c|c|} \hline \square & 11 \\ \hline \hline & \square \\ \hline \end{array} > \begin{array}{|c|c|} \hline 1 & \square \\ \hline \hline & \square \\ \hline \end{array}$$



VF
HW/Ext

8. Complete the decimals so that, when converted to mixed numbers in their simplest forms, the numerators are prime numbers.

1. 2



2. 3





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9. Kian and Nusra are discussing converting decimals into simplified mixed numbers.

2.06

1.15



Kian

These decimals could both have a denominator of 50.



Nusra

These decimals could both have a numerator of 3.

Who is correct? Explain your reasoning.



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Homework/Extension

Decimals as Fractions

Developing

1. B, C and D
2. A. $\frac{7}{10}$, B. $\frac{1}{2}$, C. $\frac{2}{5}$, D. $\frac{4}{5}$; C and D have even numbers as their numerators.
3. Chiney is correct because 0.2 is equivalent to $\frac{2}{10}$ which is equivalent to $\frac{1}{5}$. $\frac{1}{2}$ is equivalent to $\frac{5}{10}$ or 0.5.

Expected

4. A, C and D
5. A. $\frac{8}{25}$, B. $\frac{1}{20}$, C. $\frac{3}{4}$, D. $\frac{11}{20}$; C and D have prime numbers as their numerators.
6. Both children are correct because 0.15 is equivalent to $\frac{15}{100}$ or $\frac{3}{20}$. Rhian's fraction is in it's simplest form.

Greater Depth

7. $1\frac{9}{20} > 1\frac{11}{25} > 1\frac{37}{100}$
8. Various answers, for example: 1.52 becomes $1\frac{13}{25}$; 2.38 becomes $2\frac{19}{50}$.
9. Nusra is correct because 2.06 is equivalent to $2\frac{3}{50}$. 1.15 is equivalent to $1\frac{3}{20}$. 1.15 does not have an equivalent with a denominator of 50.