Reasoning and Problem Solving
Step 9: Fractions to Decimals 2

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]
Mathematics Year 6: (6F9c) Use written division methods in cases where the answer has up to two decimal places
Mathematics Year 6: (6F10) Solve problems which require answers to be rounded to specified degrees of accuracy

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Use knowledge of converting fractions to decimals to complete comparative statements. Includes decimals up to 2 decimal places.
Expected Use knowledge of converting fractions to decimals to complete comparative statements. Includes decimals up to 3 decimal places. Some use of improper fractions included.
Greater Depth Use knowledge of converting fractions to decimals to complete comparative statements. Includes decimals up to 3 decimal places. Mixed numbers or improper fractions used in every question.

Questions 2, 5 and 8 (Problem Solving)
Developing Convert fractions to decimals and arrange in order. Includes decimals up to 2 decimal places.
Expected Convert fractions to decimals and arrange in order. Includes decimals up to 3 decimal places. Some use of improper fractions included.
Greater Depth Convert fractions to decimals and arrange in order. Includes decimals up to 3 decimal places. Mixed numbers or improper fractions used in every question.

Questions 3, 6 and 9 (Reasoning)
Developing Identify and explain errors when converting fractions to decimals. Includes decimals up to 2 decimal places.
Expected Identify and explain errors when converting fractions to decimals. Includes decimals up to 3 decimal places. Some use of improper fractions included.
Greater Depth Identify and explain errors when converting fractions to decimals. Includes decimals up to 3 decimal places. Mixed numbers or improper fractions used in every question.

More Year 6 Decimals resources.

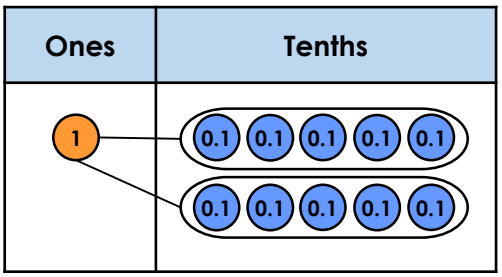
Did you like this resource? Don't forget to review it on our website.

Fractions to Decimals 2

Fractions to Decimals 2

1a. Use the short division method to convert the fraction to a decimal. Compare using <, > or =.

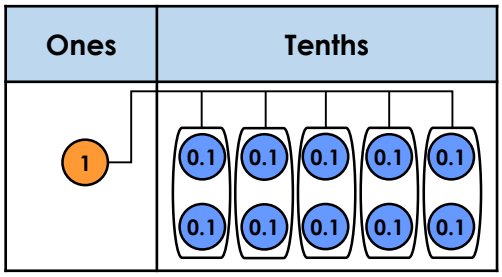
$\frac{1}{2}$ 2 | 1 • $^{1}0$ ☐ 0.57



D PS

1b. Use the short division method to convert the fraction to a decimal. Compare using <, > or =.

$\frac{1}{5}$ 5 | 1 • $^{1}0$ ☐ 0.4



D PS

2a. Use the short division method to convert the fractions to decimals.

A. $\frac{3}{5}$ B. $\frac{4}{8}$ C. $\frac{1}{4}$ D. $\frac{4}{5}$

5 | 3 • $^{3}0$ 8 | 4 • $^{4}0$

4 | 1 • $^{1}0$ $^{2}0$ 5 | 4 • $^{4}0$

Order the decimals in ascending order.

D PS

2b. Use the short division method to convert the fractions to decimals.

A. $\frac{3}{4}$ B. $\frac{6}{8}$ C. $\frac{1}{5}$ D. $\frac{2}{4}$

4 | 3 • $^{3}0$ $^{2}0$ 4 | 3 • $^{3}0$ $^{2}0$

5 | 1 • $^{1}0$ 4 | 2 • $^{2}0$

Order the decimals in ascending order.

D PS

3a. Susie is converting a fraction to a decimal. Her working out is shown below.

I think that $\frac{6}{8}$ is equivalent to 0.76

0 • 7 6
8 | 6 • $^{6}0$ $^{4}0$

Is she correct? Convince me.

D R

3b. Ant is converting a fraction to a decimal. His working out is shown below.

I think that $\frac{2}{8}$ is equivalent to 0.15

0 1 5
8 | 2 • $^{2}0$ $^{4}0$

Is he correct? Convince me.

D R

Fractions to Decimals 2

4a. Use the short division method to convert the fractions to decimals. Compare using <, > or =.

A. $\frac{6}{8}$ 8) 6 • 0 0 ☐ 0.57

B. $\frac{2}{5}$ 5) 2 • 0 ☐ 0.115

E PS

5a. Use the short division method to convert the fractions to decimals.

A. $\frac{5}{4}$ B. $\frac{7}{4}$ C. $\frac{8}{5}$ D. $\frac{6}{5}$

4) 5 • 0 0 4) 7 • 0 0

5) 8 • 0 5) 6 • 0

Order the decimals in ascending order.

E PS

6a. Jasmine converts a fraction to a decimal using short division. She says,

I think that $\frac{3}{8}$ converts to 0.374 as a decimal.

Is she correct?
Convince me.

E R

Fractions to Decimals 2

4b. Use the short division method to convert the fractions to decimals. Compare using <, > or =.

A. $\frac{1}{4}$ 4) 1 • 0 0 ☐ 0.52

B. $\frac{3}{5}$ 5) 3 • 0 ☐ 0.6

E PS

5b. Use the short division method to convert the fractions to decimals.

A. $\frac{1}{8}$ B. $\frac{7}{2}$ C. $\frac{9}{8}$ D. $\frac{9}{4}$

8) 1 • 0 0 0 4) 3 • 0

8) 9 • 0 0 0 4) 9 • 0 0

Order the decimals in ascending order.

E PS

6b. Archer converts a fraction to a decimal using short division. He says,

I think that $\frac{7}{5}$ converts to 0.4 as a decimal.

Is he correct?
Convince me.

E R

Fractions to Decimals 2

7a. Use the short division method to convert the fractions to decimals with three decimal places. Compare using <, > or =.

A. $2\frac{2}{6}$ ☐ 2.5 ☐ $\frac{10}{5}$

B. $3\frac{1}{8}$ ☐ $\frac{8}{5}$ ☐ 3.152

GD PS

Fractions to Decimals 2

7b. Use the short division method to convert the fractions to decimals with three decimal places. Compare using <, > or =.

A. $2\frac{1}{5}$ ☐ 2.1 ☐ $\frac{12}{8}$

B. $4\frac{1}{4}$ ☐ $\frac{11}{5}$ ☐ 1.25

GD PS

8a. Use the short division method to convert the fractions to decimals. Round to three decimal places where necessary.

A. $3\frac{3}{5}$ B. $\frac{9}{4}$ C. $2\frac{5}{8}$ D. $\frac{13}{5}$

Order the decimals in ascending order.

GD PS

8b. Use the short division method to convert the fractions to decimals. Round to three decimal places where necessary.

A. $3\frac{2}{9}$ B. $\frac{11}{5}$ C. $3\frac{4}{6}$ D. $\frac{10}{4}$

Order the decimals in descending order.

GD PS

9a. Scarlett converts a fraction to a decimal and rounds it to three decimal places. She says,

I think that $2\frac{5}{9}$ converts to 2.556.

Is she correct?
Convince me.

GD R

9b. Leon converts a fraction to a decimal and rounds it to three decimal places. He says,

I think that $3\frac{1}{6}$ converts to 0.116.

Is he correct?
Convince me.

GD R

Reasoning and Problem Solving
Fractions to Decimals 2

Developing

1a. 0.5, <

2a. A = 0.6, C = 0.25
Order: C, B, A, D

3a. Susie is incorrect. In the hundredths column, 40 ÷ 8 = 5, so the answer should be 0.75.

Expected

4a. A = 0.75, > B = 0.4, >

5a. A = 1.25, B = 1.75, C = 1.6, D = 1.2;
Order: A, D, C, B

6a. Jasmine is incorrect because 3 ÷ 8 = 0.375.

Greater Depth

7a. A. 2.333 < 2.5 > 2
B. 3.125 > 1.6 < 3.152

8a. A = 3.6, B = 2.25, C = 2.625, D = 2.6;
Order: B, D, C, A

9a. Scarlett is correct as 23 ÷ 9 = 2.5555555556, which is 2.556 rounded to 3 decimal places.

Reasoning and Problem Solving
Fractions to Decimals 2

Developing

1b. 0.2, <

2b. A = 0.75, C = 0.2
Order: C, D, A, B or C, D, B, A as A and B both equal 0.75

3b. Ant is incorrect. In the tenths column, 20 ÷ 8 = 2 remainder 4, so the answer should be 0.25.

Expected

4b. A = 0.25, < B = 0.6, =

5b. A = 0.125, B = 3.5, C = 1.125, D = 2.25;
Order: A, C, D, B

6b. Archer is incorrect because 7 ÷ 5 = 1.4.

Greater Depth

7b. A. 0.2 < 2.1 > 1.5
B. 4.25 > 2.2 > 1.25

8b. A = 3.222, B = 2.2, C = 3.667, D = 2.5;
Order: C, A, B, D

9b. Leon is incorrect as the answer is 3.167, rounded to 3 decimal places.