Reasoning and Problem Solving
Step 2: Decimals as Fractions 1

National Curriculum Objectives:

Mathematics Year 5: (5F6a) Read and write decimal numbers as fractions [for example, 0.71 = 71/100]
Mathematics Year 5: (5F6b) Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
Mathematics Year 5: (5F12) Solve problems which require knowing percentage and decimal equivalents of 1/2 , 1/4 , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Use the number cards to complete a statement using decimals as fractions. Includes tenths and hundredths only.
Expected Use the number cards to complete a statement using decimals as fractions. Questions to support converting fractions and decimals. Includes hundredths and quarters.
Greater Depth Use the number cards to complete a statement using decimals as fractions. Includes denominators of 25 and 50.

Questions 2, 5 and 8 (Reasoning)
Developing Explain which statement using decimals as fractions is correct. Includes tenths and hundredths only.
Expected Explain which statement using decimals as fractions is correct. Questions to support converting fractions and decimals. Includes half and quarters.
Greater Depth Explain which statement using decimals as fractions is correct. Includes fifths and denominators of 50.

Questions 3, 6 and 9 (Problem Solving)
Developing Solve the word problem by using decimals as fractions. Includes tenths and hundredths only.
Expected Solve the word problem by using decimals as fractions. Questions to support converting fractions and decimals. Includes tenths, half and quarters.
Greater Depth Solve the word problem by using decimals as fractions. Includes fifths and denominators of 25.

More Year 5 Decimals and Percentages resources.

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

Decimals as Fractions 1

1a. Use the number cards to complete the statement below.

6	100	0.6	10	60

$\frac{\square}{\square} = \square$

D PS

1b. Use the number cards to complete the statement below.

10	80	0.8	100	8

$\frac{\square}{\square} = \square$

D PS

2a. Josh says,

$\frac{1}{10}$ is equal to 0.01

Maisie says,

$\frac{1}{10}$ is equal to 0.1

Who is correct? Prove it.

D R

2b. Alfie says,

$\frac{3}{100}$ is equal to 0.3

Kyra says,

$\frac{3}{100}$ is equal to 0.03

Who is correct? Prove it.

D R

3a. Solve the word problem below.

I am thinking of a decimal number.

It is bigger than $\frac{3}{10}$.

It is smaller than $\frac{70}{100}$.

What number could I be thinking of?

Find 3 possibilities.

D PS

3b. Solve the word problem below.

I am thinking of a decimal number.

It is bigger than $\frac{50}{100}$.

It is smaller than $\frac{9}{10}$.

What number could I be thinking of?

Find 3 possibilities.

D PS

Decimals as Fractions 1

4a. Use the number cards to complete the statement below.

100	0.25	4	1	25

$\frac{\square}{\square} = \square$

E PS

Decimals as Fractions 1

4b. Use the number cards to complete the statement below.

3	75	0.75	4	100

$\frac{\square}{\square} = \square$

E PS

5a. Ashton says,

$\frac{3}{4}$ is equal to 0.34

Zaira says,

$\frac{3}{4}$ is equal to 0.75

Who is correct? Prove it.

E R

5b. Darren says,

$\frac{1}{2}$ is equal to 0.5

Saskia says,

$\frac{1}{2}$ is equal to 0.2

Who is correct? Prove it.

E R

6a. Solve the word problem below.

I am thinking of a decimal number.

It is bigger than $\frac{1}{2}$.

It is smaller than $\frac{8}{10}$.

What number could I be thinking of?

Find 3 possibilities.

E PS

6b. Solve the word problem below.

I am thinking of a decimal number.

It is bigger than $\frac{1}{4}$.

It is smaller than $\frac{6}{10}$.

What number could I be thinking of?

Find 3 possibilities.

E PS

Decimals as Fractions 1

7a. Use the number cards to complete the statement below.

25	16	8	0.32	50

$\frac{\square}{\square} = \square$

GD PS

7b. Use the number cards to complete the statement below.

50	12	25	0.24	6

$\frac{\square}{\square} = \square$

GD PS

8a. Jason says,

$\frac{1}{5}$ is equal to 0.5

Lily says,

$\frac{1}{5}$ is equal to 0.2

Who is correct? Prove it.

GD R

8b. Imran says,

$\frac{1}{50}$ is equal to 0.02

Bella says,

$\frac{1}{50}$ is equal to 0.5

Who is correct? Prove it.

GD R

9a. Solve the word problem below.

I am thinking of a decimal number.

It is bigger than $\frac{25}{50}$.

It is smaller than $\frac{4}{5}$.

What number could I be thinking of?

Find 3 possibilities.

GD PS

9b. Solve the word problem below.

I am thinking of a decimal number.

It is bigger than $\frac{1}{5}$.

It is smaller than $\frac{20}{25}$.

What number could I be thinking of?

Find 3 possibilities.

GD PS

Reasoning and Problem Solving
Decimals as Fractions 1

Developing

1a. Various possible answers, for example: $\frac{6}{10} = 0.6$, $\frac{60}{100} = 0.6$

2a. Maisie is correct because $\frac{1}{10}$ is equal to $\frac{10}{100}$ which is equal to 0.1.

3a. Various possible answers, for example:

0.4, 0.5, 0.6

Expected

4a. Various possible answers, for example: $\frac{1}{4} = 0.25$, $\frac{25}{100} = 0.25$

5a. Zaira is correct because $\frac{3}{4}$ is equal to $\frac{75}{100}$ which is equal to 0.75.

6a. Various possible answers, for example:

0.6, 0.7, 0.75

Greater Depth

7a. Various possible answers, for example: $\frac{8}{25} = 0.32$, $\frac{16}{50} = 0.32$

8a. Lily is correct because $\frac{1}{5}$ is equal to $\frac{2}{10}$ which is equal to 0.2.

9a. Various possible answers, for example:

0.6, 0.7, 0.75

Reasoning and Problem Solving
Decimals as Fractions 1

Developing

1b. Various possible answers, for example: $\frac{8}{10} = 0.8$, $\frac{80}{100} = 0.8$

2b. Kyra is correct because 0.3 is equal to $\frac{30}{100}$.

3b. Various possible answers, for example:

0.6, 0.7, 0.8

Expected

4b. Various possible answers, for example: $\frac{3}{4} = 0.75$, $\frac{75}{100} = 0.75$

5b. Darren is correct because $\frac{1}{2}$ is equal to $\frac{50}{100}$ which is equal to 0.5.

6b. Various possible answers, for example:

0.3, 0.4, 0.5

Greater Depth

7b. Various possible answers, for example: $\frac{6}{25} = 0.24$, $\frac{12}{50} = 0.24$

8b. Imran is correct because $\frac{1}{50}$ is equal to $\frac{2}{100}$ which is equal to 0.02.

9b. Various possible answers, for example:

0.25, 0.3, 0.4