# Reasoning and Problem Solving Step 15: Equivalent FDP

# National Curriculum Objectives:

Mathematics Year 5: (5F12) <u>Solve problems which require knowing percentage and</u> <u>decimal equivalents of 1/2 , 1/4 , 1/5 , 2/5 , 4/5 and those fractions with a denominator of</u> <u>a multiple of 10 or 25</u>

# Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Explain which fraction, decimal or percentage is the odd one out. Includes half, tenths and hundredths only.

Expected Explain which fraction, decimal or percentage is the odd one out. Includes half, quarters, fifths and denominators of a multiple of 10 or 25.

Greater Depth Explain which fraction, decimal or percentage is the odd one out. Includes half, quarters, fifths and denominators of a multiple of 5, 10 and 25.

#### Questions 2, 5 and 8 (Problem Solving)

**Developing** Explain who has the largest fraction, decimal or percentage. Includes 2 options and half, tenths and hundredths only.

Expected Explain who has the largest fraction, decimal or percentage. Includes 3 options and half, quarters, fifths and denominators of a multiple of 10 or 25.

Greater Depth Explain who has the largest fraction, decimal or percentage. Includes 5 options and half, quarters, fifths and denominators of a multiple of 5, 10 and 25.

#### Questions 3, 6 and 9 (Reasoning)

Developing Explain which statement about equivalent fractions, decimals and percentages is correct. Includes half, tenths and hundredths only.

Expected Explain which statement about equivalent fractions, decimals and percentages is correct. Includes half, quarters, fifths and denominators of a multiple of 10 or 25.

Greater Depth Explain which statement about equivalent fractions, decimals and percentages is correct. Includes half, quarters, fifths and denominators of a multiple of 5, 10 and 25.

More <u>Year 4 and Year 5 Money, Decimals and Percentages</u> resources.

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Reasoning and Problem Solving – Equivalent FDP – Teaching Information



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Reasoning and Problem Solving – Equivalent FDP – Year 5 Developing

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Reasoning and Problem Solving – Equivalent FDP – Year 5 Expected

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Equivalent FDP			Equivalent FDP		
7a. Circle the o	dd one out.		7b. Circle the odd one out.		
0.6	<u>48</u> 80	<u>3</u> 5	0.7	<u>14</u> 20	<u>35</u> 50
<u>60</u> 80	<u>12</u> 20	60%	<u>49</u> 70	<u>30</u> 40	70%
Explain your re	asoning.	5 R	Explain your reasoning.		
8a. Five friends are sharing some cookies.			8b. Five witches are making potions.		
Imran eats 0.15 of the cookies.			Zadie makes 0.3 of the potions.		
Kelly eats 30%. Danny eats <del>9</del>			Gwen makes 25%. Ursula makes $\frac{12}{12}$ .		
90 Mia eats 0.25. Harry eats $\frac{16}{24}$ .			$\frac{60}{\text{Mia makes 0.15.}}$ Winnie makes $\frac{4}{12}$ .		
80 Who eats the most cookies? Who eats the least?			40 Who makes the most potions? Who makes the least?		
9a. Alice and Wilson are comparing fractions, decimals and percentages.			9b. Rita and Alfie are comparing fractions, decimals and percentages.		
Alice says, $56 \over 70 = 70\% = 0.7$			Rita says, 63 = 70% = 0.7		
$\frac{56}{70} =$	80% = 0.8	Wilson says,	$\frac{63}{90} = 75\% = 0.75$ Alfie says,		
Who is correct? Convince me.			Who is correct? Convince me.		
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Reasoning and Problem Solving – Equivalent FDP – Year 5 Greater Depth

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## **Reasoning and Problem Solving Equivalent FDP**

### **Developing**

1a.  $\frac{2}{10}$  is the odd one out because the other fractions, decimal and percentage are equivalent.

2a. Bella eats the most cake. 3a. Sven is correct because  $\frac{7}{10} = \frac{70}{100}$ .

### **Expected**

4a.  $\frac{1}{8}$  is the odd one out because the other fractions, decimal and percentage are equivalent.

5a. Lucas eats the most pizza. Oscar eats the least.

6a. Daniel is correct because  $\frac{10}{50} = \frac{2}{10}$ .

### **Greater Depth**

7a.  $\frac{60}{80}$  is the odd one out because the other fractions, decimal and percentage are equivalent.

8a. Kelly eats the most cookies. Danny eats the least.

9a. Wilson is correct because  $\frac{56}{70} = \frac{8}{10}$ .

# Reasoning and Problem Solving **Equivalent FDP**

#### **Developing**

1b.  $\frac{3}{10}$  is the odd one out because the other fractions, decimal and percentage are equivalent.

2b. Naomi feeds the most lions. 3b. Holly is correct because  $\frac{1}{2} = \frac{50}{100}$ .

### **Expected**

4b.  $\frac{1}{25}$  is the odd one out because the other fractions, decimal and percentage are equivalent.

5b. Helen waters the most plants. Bill waters the least.

6b. Leon is correct because  $\frac{60}{90} = \frac{3}{4}$ .

#### **Greater Depth**

7b.  $\frac{30}{40}$  is the odd one out because the other fractions, decimal and percentage are equivalent.

8b. Zadie makes the most potions. Winnie makes the least.

9b. Rita is correct because  $\frac{63}{90} = \frac{7}{10}$ .



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Reasoning and Problem Solving – Equivalent FDP ANSWERS