Reasoning and Problem Solving
Step 23: Order FDP

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: (6F11) Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Explain whether an answer is correct. Using percentages and decimals that are multiples of 5 and fractions that are halves, thirds, quarters, fifths and tenths.
Expected Explain whether an answer is correct. Using any percentage and decimal numbers and any proper fraction.
Greater Depth Explain whether an answer is correct. Using mixed numbers and improper fractions, decimals greater than 1 and percentages more than 100.

Questions 2, 5 and 8 (Problem Solving)
Developing Complete a calculation. Using percentages and decimals that are multiples of 5 and fractions that are halves, thirds, quarters, fifths and tenths.
Expected Complete a calculation. Using any percentage and decimal numbers and any proper fraction.
Greater Depth Complete a calculation. Using mixed numbers and improper fractions, decimals greater than 1 and percentages more than 100.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether a statement is correct. Using percentages and decimals that are multiples of 5 and fractions that are halves, thirds, quarters, fifths and tenths.
Expected Explain whether a statement is correct. Using any percentage and decimal numbers and any proper fraction.
Greater Depth Explain whether a statement is correct. Using mixed numbers and improper fractions, decimals greater than 1 and percentages more than 100.

More Year 5 and Year 6 Decimals and Percentages resources.

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

Order FDP

1a. Deborah has put these fractions, decimals and percentages in order from smallest to largest.

$\frac{1}{2}$ $\frac{3}{10}$ 20% 0.45

Is she correct? Explain your answer.

D

6 R

Order FDP

1b. Henry has put these fractions, decimals and percentages in order from smallest to largest.

0.25 $\frac{4}{5}$ 70% 0.1

Is he correct? Explain your answer.

D

6 R

2a. Complete the calculation using a decimal and a percentage.

$\frac{2}{4} = 80\% - \square - \square$

Find 3 possibilities.

D

6 PS

2b. Complete the calculation using a decimal and a percentage.

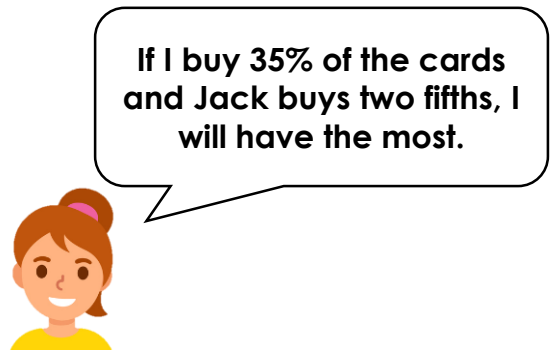
$\frac{4}{10} = 90\% - \square - \square$

Find 3 possibilities.

D

6 PS

3a. Janine says,

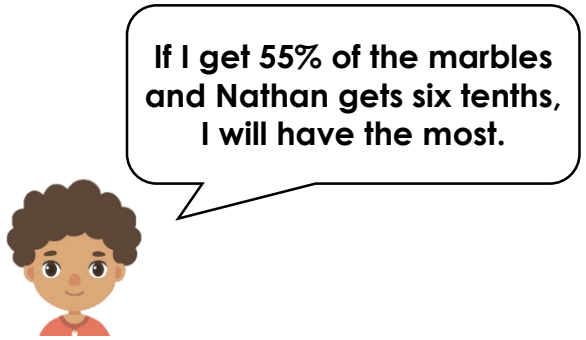


Is she correct? Explain your answer.

D

6 R

3b. Jamal says,



Is he correct? Explain your answer.

D

6 R

Order FDP

4a. Frankie has put these fractions, decimals and percentages in order from smallest to largest.

22%	$\frac{1}{7}$	0.25	0.4

Is she correct? Explain your answer.

E

6 R

Order FDP

4b. Amy has put these fractions, decimals and percentages in order from smallest to largest.

0.5	$\frac{3}{9}$	46%	0.65

Is she correct? Explain your answer.

E

6 R

5a. Complete the calculation using a decimal and a percentage.

$$\frac{3}{12} = 82\% - \square - \square$$

Find 3 possibilities.

E

6 PS

5b. Complete the calculation using a decimal and a percentage.

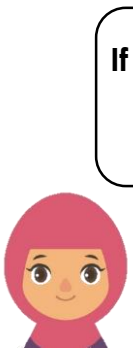
$$\frac{6}{8} = 93\% - \square - \square$$

Find 3 possibilities.

E

6 PS

6a. Hafsa says,

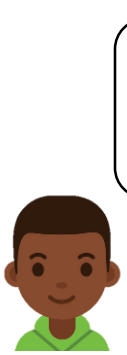


Is she correct? Explain your answer.

E

6 R

6b. Ismail says,



Is he correct? Explain your answer.

E

6 R

Order FDP

7a. Hannah has put these fractions, decimals and percentages in order from largest to smallest.

1.7	$\frac{11}{4}$	125%	2.3

Is she correct? Explain your answer.

GD

6 R

Order FDP

7b. Callum has put these fractions, decimals and percentages in order from largest to smallest.

1.45	$\frac{8}{5}$	108%	2.6

Is he correct? Explain your answer.

GD

6 R

8a. Complete the calculation using a decimal greater than 1 and a percentage greater than 100.

$$\frac{13}{4} = \square - 130\% - \square$$

Find 3 possibilities.

GD

6 PS

8b. Complete the calculation using a decimal greater than 1 and a percentage greater than 100.

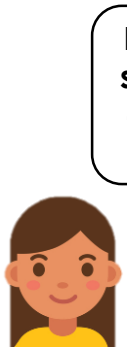
$$1\frac{3}{4} = \square - \square - 150\%$$

Find 3 possibilities.

GD

6 PS

9a. Suzanne says,



If I use 120% of the paper supply and Alex uses one and a quarter, I will have used the most.

Is she correct? Explain your answer.

GD

6 R

9b. Gail says,

If I have 415% of the books and Albert has four and six eighths, I will have the most.

Is she correct? Explain your answer.

GD

6 R

Reasoning and Problem Solving Order FDP

Developing

1a. No. The correct order is 20%, $\frac{3}{10}$, 0.45 and $\frac{1}{2}$ $\frac{1}{2}$ is equal to 50% so is greater than all the rest.

2a. Various possible answers, including: 20% and 0.1, 10% and 0.2, 0.05 and 25%.

3a. No, Jack will have the most because $\frac{2}{5}$ is equivalent to 40% which is more than 35%.

Expected

4a. No. The correct order is $\frac{1}{7}$, 22%, 0.25 and 0.4. $\frac{1}{7}$ is equivalent to 0.14 which is smaller than 22%.

5a. Various possible answers, including: 0.3 and 27%, 0.35 and 22%, 0.4 and 17%.

6a. No, Paul will have eaten the most because $\frac{1}{3}$ is equivalent to 33.3% so is greater than 27%.

Greater Depth

7a. No, the correct order is $\frac{11}{4}$, 2.3, 1.7 and 125%.

8a. Various possible answers, including: 565% and 1.1, 600% and 1.45, 825% and 3.7

9a. No, Alex has the most because $1\frac{1}{4}$ is equivalent to 125% so is greater than 120%.

Reasoning and Problem Solving Order FDP

Developing

1b. No. The correct order is 0.1, 0.25, 70% and $\frac{4}{5}$. 0.1 is the smallest and should be first.

2b. Various possible answers, including: 40% and 0.1, 10% and 0.4, 15% and 0.35.

3b. No, Nathan will have the most because $\frac{6}{10}$ is equivalent to 60% which is more than 55%.

Expected

4b. No. The correct order is $\frac{3}{9}$, 46%, 0.5, and 0.65. $\frac{3}{9}$ is equal to 0.33 or 33.3% so is less than 46%.

5b. Various possible answers, including: 0.15 and 3%, 0.1 and 8%, 0.16 and 2%.

6b. No, Julie has the most because $\frac{2}{3}$ is equivalent to 66.6% and is greater than 64%.

Greater Depth

7b. No, the correct order is 2.6, $\frac{8}{5}$, 1.45 and 108%.

8b. Various possible answers, including: 500% and 1.75, 600% and 2.75, 650% and 3.25

9b. No, Albert has the most because $4\frac{6}{8}$ is equivalent to 475% which is greater than 415%.