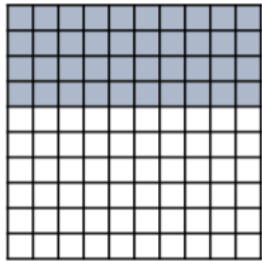


Activity 1

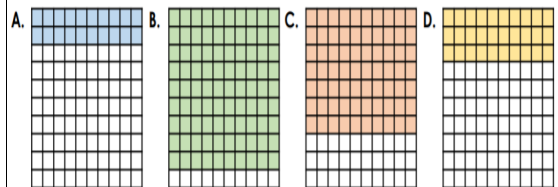
LO: To recognise and write decimal equivalents.

Core Skill

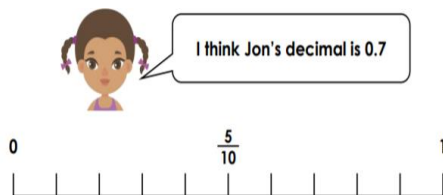
Here is my example. This representation shows $\frac{40}{100}$, which is equivalent to 0.4.



Write down the decimal and fraction equivalents for these representations. Look at my example to help you.



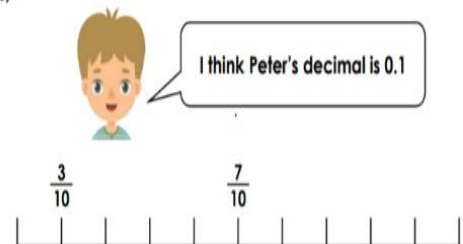
Depth Task 1 - Jon is thinking of a decimal between $\frac{1}{10}$ and $\frac{6}{10}$. Megan says,



Is Megan correct? What decimals could Jon be thinking of?

Depth Task 2 - Peter is thinking of a decimal between $\frac{3}{10}$ and $\frac{7}{10}$.

Jayden says,



Is Jayden correct? What decimals could Peter be thinking of?

Greater Depth Task

Who is correct? Explain your answer.

$$\frac{6}{100} = 0.06$$



Leo

This decimal is incorrect, it should be 0.6

This decimal is correct because it shows six hundredths.



Lucy

Activity 2

LO: To order and compare decimal equivalents.

Core Skill

Use > or < to compare these decimal numbers. Use your knowledge of place value to help you.

$2.05 \square 2.50$

$4.96 \square 4.69$

$1.21 \square 1.12$

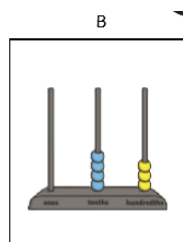
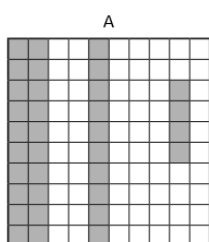
$0.01 \square 0.1$

$3.54 \square 3.45$

$2.11 \square 2.9$

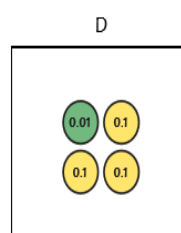
Depth Task

Put these different representations in ascending order.



C

$$\frac{13}{100}$$



E

 0.04

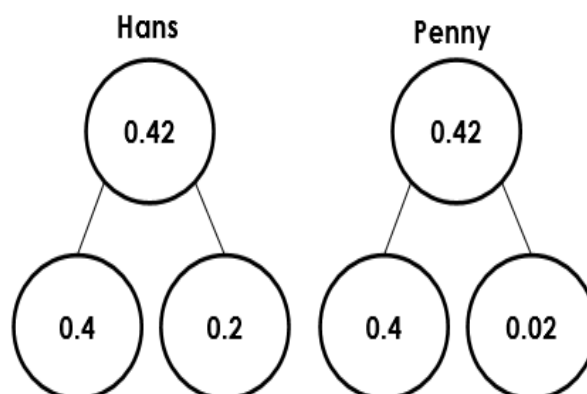
F

 0.40

G
ninety-seven hundredths

Greater Depth Task

Hans and Penny are partitioning a number. Who is correct? Explain how you know.

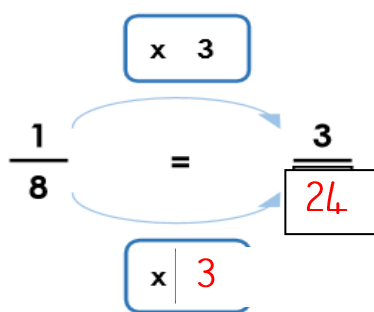


Activity 3

LO: To recognise and show families of common equivalent fractions.

Core skill

To find an equivalent fraction, we must multiply the numerator and denominator by the same number. Write your answers into your book. Look at my example



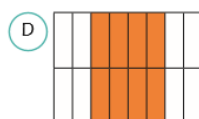
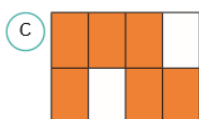
$$1) \frac{2}{3} = \frac{\quad}{9} \quad 2) \frac{2}{5} = \frac{\quad}{15}$$

$$5) \frac{3}{4} = \frac{9}{\quad} \quad 6) \frac{1}{2} = \frac{6}{\quad}$$

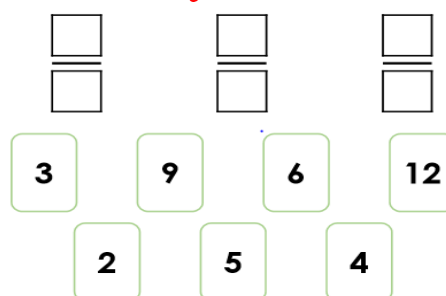
$$9) \frac{2}{9} = \frac{\quad}{18} \quad 10) \frac{3}{5} = \frac{\quad}{20}$$

$$13) \frac{4}{12} = \frac{\quad}{3} \quad 14) \frac{4}{6} = \frac{\quad}{3}$$

Depth Task - Write the fraction for each representation below. Using your knowledge of equivalent fractions, work out which is the odd one out and explain why.



Using the digit cards below, create three equivalent fractions. Remember you must multiply the numerator and denominator by the same number.



Greater Depth - Kira is looking at the following fractions. Is she correct? Explain how you know.

$$\frac{3}{4} = \frac{21}{32}$$

The fractions are not equivalent. The numerator and denominator have not been multiplied by the same number.



Kira

Activity 4

LO: To solve problems involving harder fractions of quantities.

Core skill

Copy the following into your books.

1. $\frac{1}{4}$ of 48 =
2. $\frac{2}{3}$ of 18 =
3. $\frac{3}{5}$ of 45 =
4. $\frac{2}{3}$ of 36 =
5. $\frac{3}{4}$ of 360 =
6. $\frac{6}{10}$ of 480 =

Example

$\frac{3}{4}$ of 48

Step one: divide the whole number by the denominator.

48			
12	12	12	12

$$48 \div 4 =$$

Step two: multiply your answer by the numerator.

$$12 \times 3 =$$

$$\frac{3}{4} \text{ of } 48 = 36$$

Depth Task

Manveer and May have placed their calculations in ascending order.



Manveer

$$\frac{3}{4} \text{ of } 32 \quad \frac{2}{6} \text{ of } 42 \quad \frac{5}{7} \text{ of } 35 \quad \frac{3}{8} \text{ of } 48$$

$$\frac{1}{8} \text{ of } 48 \quad \frac{3}{7} \text{ of } 35 \quad \frac{3}{4} \text{ of } 32 \quad \frac{5}{6} \text{ of } 42$$



Who is correct? Explain how you know.

Greater Depth Task

Lucy has found a recipe of 4 cupcakes but she only needs to make 3. What fraction of the recipe does she need to make?

Cupcake Ingredients

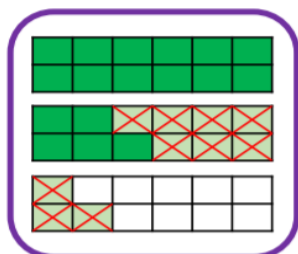
4 eggs
200g self-raising flour
100g butter
80g sugar

How much of each ingredient will she need?

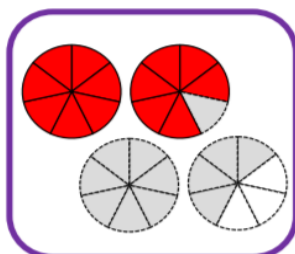
Activity 5

LO: To add and subtract fractions with the same denominator.

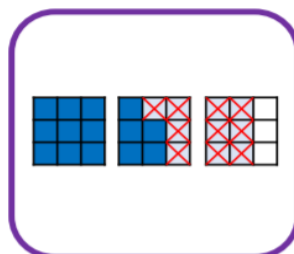
Core skill - Write the subtraction calculations for each representation into your book. The first question has been started for you.



A. $\frac{27}{12} - \frac{\square}{\square} = \frac{\square}{\square}$

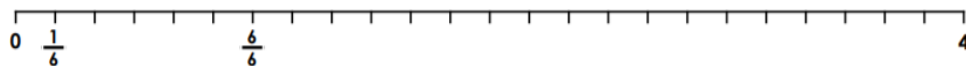


B. $\frac{\square}{\square} - \frac{\square}{\square} = \frac{\square}{\square}$



C. $\frac{\square}{\square} - \frac{\square}{\square} = \frac{\square}{\square}$

Depth Task - Complete the calculations below. You may use the number line to help you.



A. $\frac{5}{6} + \frac{3}{\square} + \frac{7}{\square} + \frac{4}{6} = \frac{\square}{\square}$



B. $\frac{\square}{\square} + \frac{2}{\square} + \frac{11}{\square} + \frac{6}{\square} = \frac{23}{9}$

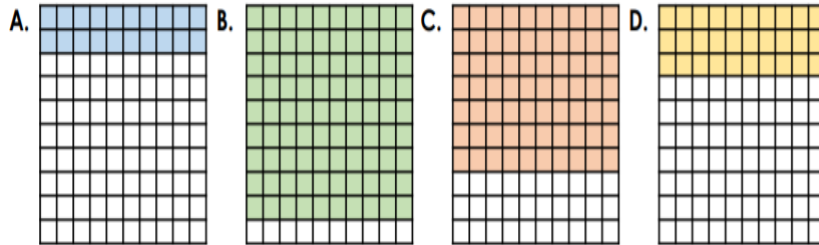
Greater Depth Task - Find a path through the maze by adding fractions together to reach the finishing total. There may be more than one path.

Start →	$\frac{1}{15}$	$\frac{3}{15}$	$\frac{9}{15}$	$\frac{10}{15}$	$\frac{2}{15}$	$\frac{7}{15}$	$\frac{9}{15}$
	$\frac{4}{15}$	$\frac{3}{15}$	$\frac{11}{8}$	$\frac{3}{15}$	$\frac{2}{15}$	$\frac{2}{15}$	$\frac{17}{15}$
	$\frac{8}{15}$	$\frac{7}{15}$	$\frac{2}{15}$	$\frac{4}{15}$	$\frac{19}{15}$	$\frac{2}{15}$	$\frac{1}{15}$
	$\frac{7}{15}$	$\frac{2}{15}$	$\frac{5}{15}$	$\frac{6}{15}$	$\frac{4}{15}$	$\frac{2}{15}$	$\frac{49}{15}$
						Finish →	

Answers

Activity 1

Core skill



0.2, 20/100

0.9, 90/100

0.7, 70/100

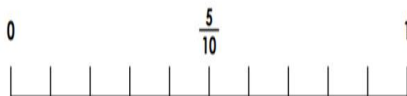
0.3, 30/100

Depth Task 1

Jon is thinking of a decimal between $\frac{1}{10}$ and $\frac{6}{10}$. Megan says,



I think Jon's decimal is 0.7



Megan is not correct because the decimal must be bigger than 0.1 and smaller than 0.6.

Jon's decimal could be 0.7, 0.8 or 0.9.

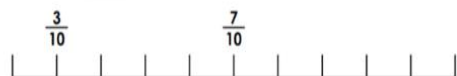
Depth Task 2

Peter is thinking of a decimal between $\frac{3}{10}$ and $\frac{7}{10}$.

Jayden says,



I think Peter's decimal is 0.1



Jayden is not correct because $0.1 = \frac{1}{10}$. The decimal must be bigger than $0.3 = \frac{3}{10}$ and smaller than $0.7 = \frac{7}{10}$. Peter's decimal could be 0.4, 0.5 or 0.6.

Greater depth task

Who is correct? Explain your answer.

$$\frac{6}{100} = 0.06$$



This decimal is incorrect, it should be 0.6

This decimal is correct because it shows six hundredths.



Lucy is correct.

0 tenths and 6 hundredths together make 6 hundredths.

Answers

Activity 2

Core skill

9a. Use > or < to compare these decimal numbers.

$$2.05 < 2.50$$

$$1.21 > 1.12$$

$$3.54 > 3.45$$

VF

9b. Use > or < to compare these decimal numbers.

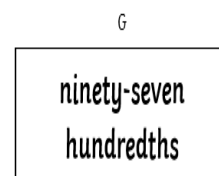
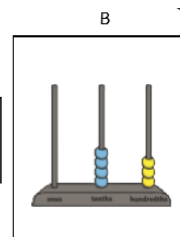
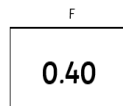
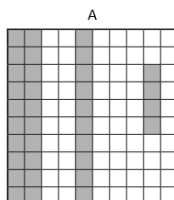
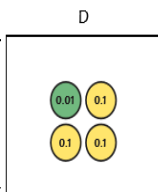
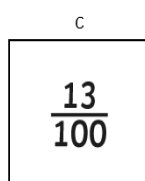
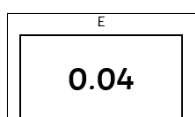
$$4.96 > 4.69$$

$$0.01 < 0.1$$

$$2.11 < 2.9$$

VF

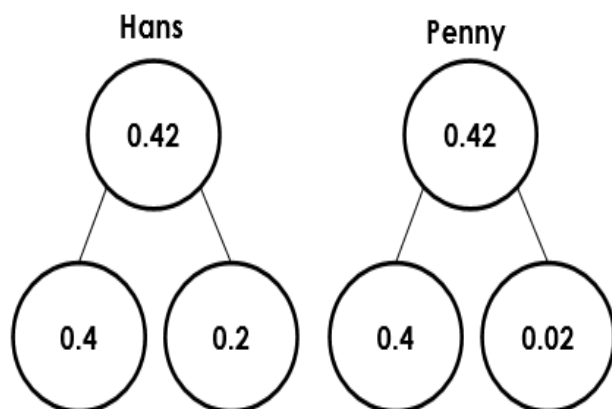
Depth task - Put these decimals in ascending order.



E (0.04), C (0.13), D (0.31), A (0.34), F (0.4), B (0.43), G (0.97)

Greater Depth Task

Hans and Penny are partitioning a number. Who is correct? Explain how you know.



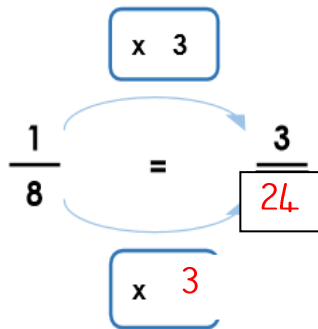
Penny is correct.

Hans has partitioned the number into 4 tenths and 2 tenths instead of 2 tenths and 2 hundredths.

Answers

Activity 3

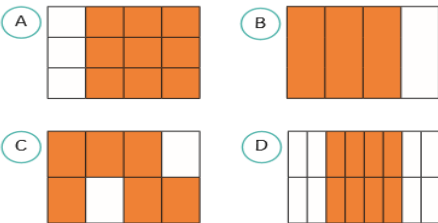
Core Skill



VI

$$\begin{array}{ll} 1) \frac{2}{3} = \frac{6}{9} & 2) \frac{2}{5} = \frac{6}{15} \\ 5) \frac{3}{4} = \frac{9}{12} & 6) \frac{1}{2} = \frac{6}{12} \\ 9) \frac{2}{9} = \frac{4}{18} & 10) \frac{3}{5} = \frac{12}{20} \\ 13) \frac{4}{12} = \frac{1}{3} & 14) \frac{4}{6} = \frac{2}{3} \end{array}$$

Depth Task



A=9/12, B=3/4 and C=6/8. All of these fractions are equivalent to 3/4.

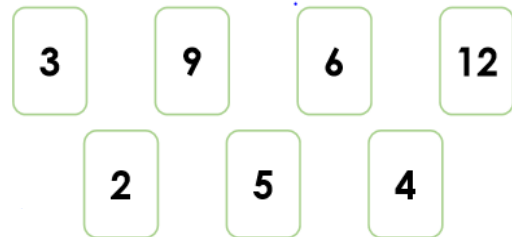
D is the odd one out because it shows 8/16 which is equivalent to a 1/2.

These are all equivalent to 1/3.



5a. Using the digit cards below, create three equivalent fractions.

$$\frac{2}{6} = \frac{3}{9} = \frac{4}{12}$$



PS

Greater Depth

Kira is correct. The numerator has been multiplied by 7 and the denominator has been multiplied by 8. An equivalent fraction of $\frac{3}{4} = \frac{21}{28}$.

$$\frac{3}{4} = \frac{21}{28}$$

The fractions are not equivalent. The numerator and denominator have not been multiplied by the same number.



Answers

Activity 4

Core skill

1. $\frac{1}{4}$ of 48 = 12 ($48 \div 4 = 12$)
2. $\frac{2}{3}$ of 18 = 12 ($18 \div 3 = 6$ $6 \times 2 = 12$)
3. $\frac{3}{5}$ of 45 = 27 ($45 \div 5 = 9$ $9 \times 3 = 27$)
4. $\frac{2}{3}$ of 36 = 24 ($36 \div 3 = 12$ $12 \times 2 = 24$)
5. $\frac{3}{4}$ of 360 = 270 ($360 \div 4 = 90$ $90 \times 3 = 270$)
6. $\frac{6}{10}$ of 480 = 288 ($480 \div 10 = 48$ $48 \times 6 = 288$)

Depth Task

Manveer and May have placed their calculations in ascending order.



Manveer

$\frac{3}{4}$ of 32 $\frac{2}{6}$ of 42 $\frac{5}{7}$ of 35 $\frac{3}{8}$ of 48

$\frac{1}{8}$ of 48 $\frac{3}{7}$ of 35 $\frac{3}{4}$ of 32 $\frac{5}{6}$ of 42



Who is correct? Explain how you know.

May is correct because her answers to her calculations are 6, 15, 24, 35 and these are in the correct order.

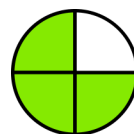
However, Manveer answers are 24, 14, 25, 18. These are not in ascending order.

Greater Depth Task

Lucy needs $\frac{3}{4}$ of the recipe because 3 out of 4 equals to $\frac{3}{4}$.

Cupcake Ingredients

4 eggs
200g self-raising flour
100g butter
80g sugar



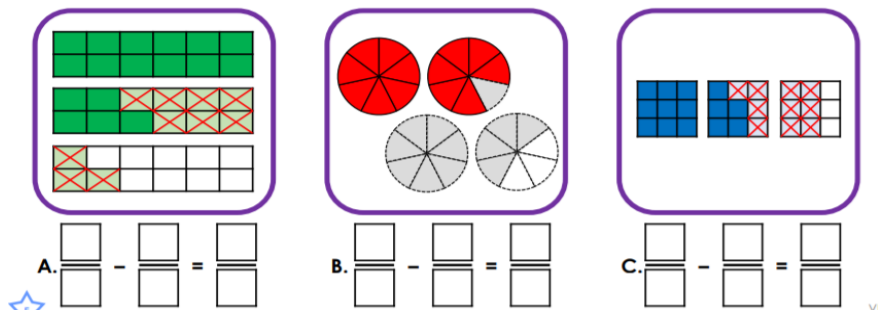
How much of each ingredient will she need?

3 eggs, 150g of self-raising flour, 75g of butter and 60g of sugar.

Answers

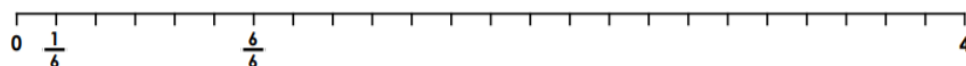
Activity 5

Core skill -

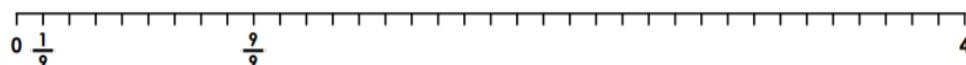


A. $\frac{27}{12} - \frac{10}{12} = \frac{17}{12}$; B. $\frac{25}{7} - \frac{12}{7} = \frac{13}{7}$; C. $\frac{24}{9} - \frac{10}{9} = \frac{14}{9}$

Depth Task - Use the number lines to complete the calculations below.



A. $\frac{5}{6} + \frac{3}{\square} + \frac{7}{\square} + \frac{4}{6} = \frac{\square}{\square}$



B. $\frac{\square}{\square} + \frac{2}{\square} + \frac{11}{\square} + \frac{6}{\square} = \frac{23}{9}$

A. $\frac{5}{6} + \frac{3}{6} + \frac{7}{6} + \frac{4}{6} = \frac{19}{6}$; B. $\frac{4}{9} + \frac{2}{9} + \frac{11}{9} + \frac{6}{9} = \frac{23}{9}$

Greater Depth Task

Various answers, for example:

Start →	$\frac{1}{15}$	$\frac{3}{15}$	$\frac{9}{15}$	$\frac{10}{15}$	$\frac{2}{15}$	$\frac{7}{15}$	$\frac{9}{15}$	
	$\frac{4}{15}$	$\frac{3}{15}$	$\frac{11}{8}$	$\frac{3}{15}$	$\frac{2}{15}$	$\frac{2}{15}$	$\frac{17}{15}$	
	$\frac{8}{15}$	$\frac{7}{15}$	$\frac{2}{15}$	$\frac{4}{15}$	$\frac{19}{15}$	$\frac{2}{15}$	$\frac{1}{15}$	
	$\frac{7}{15}$	$\frac{2}{15}$	$\frac{5}{15}$	$\frac{6}{15}$	$\frac{4}{15}$	$\frac{2}{15}$	$\frac{49}{15}$	Finish →