RECALL

Write the equivalent percentage and decimal to these fractions

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{6}$

$\frac{1}{8}$

$\frac{1}{9}$

$\frac{1}{10}$

$\frac{1}{12}$

$\frac{1}{5}$

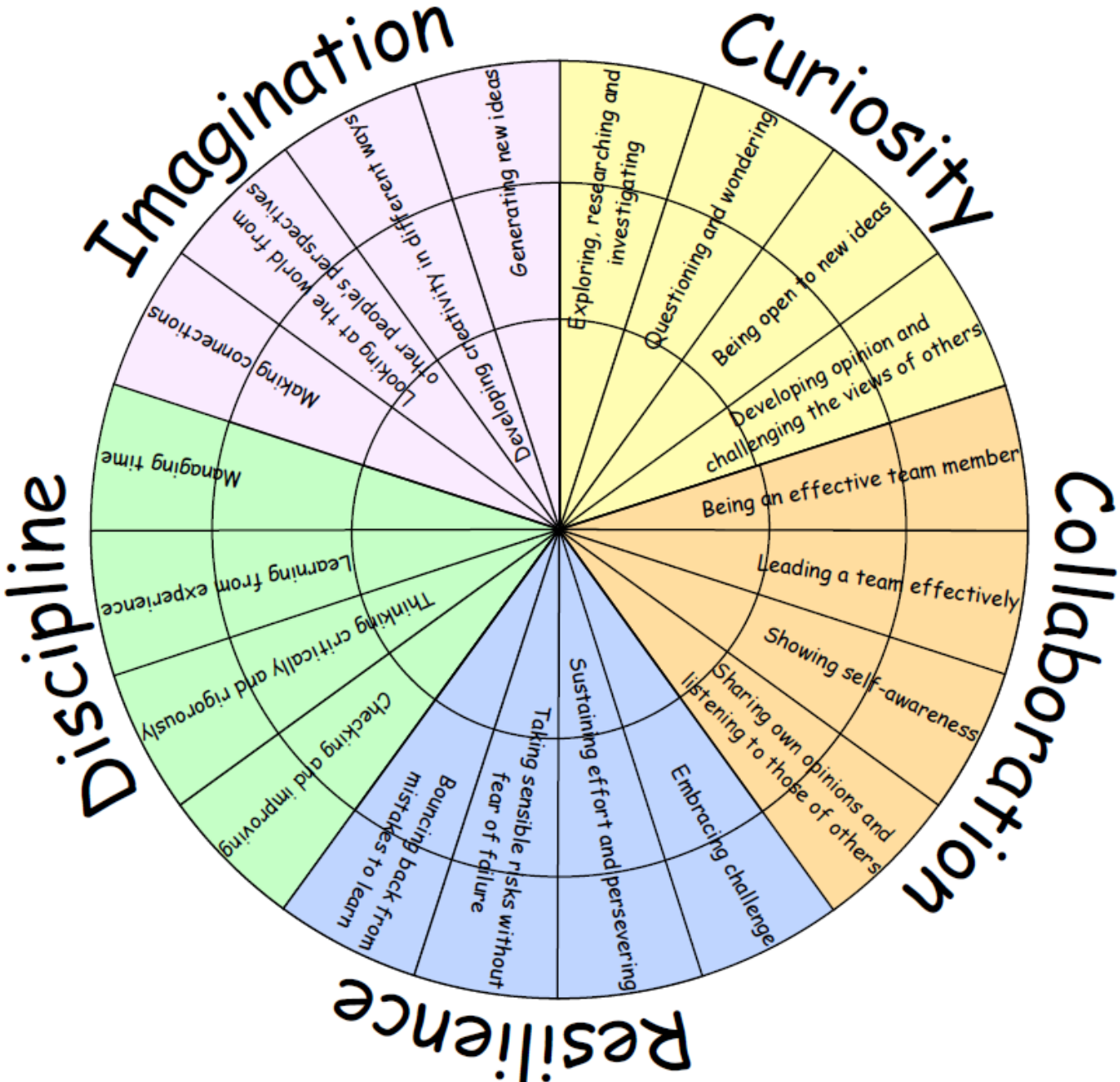
$\frac{1}{7}$

Explain how you solved each one and can you think of a different way to do it?

I CAN RECALL AND USE EQUIVALENCE BETWEEN FRACTIONS, DECIMALS AND % TO SOLVE PROBLEMS

Percentage (15ii)

LEARNING HABITS?

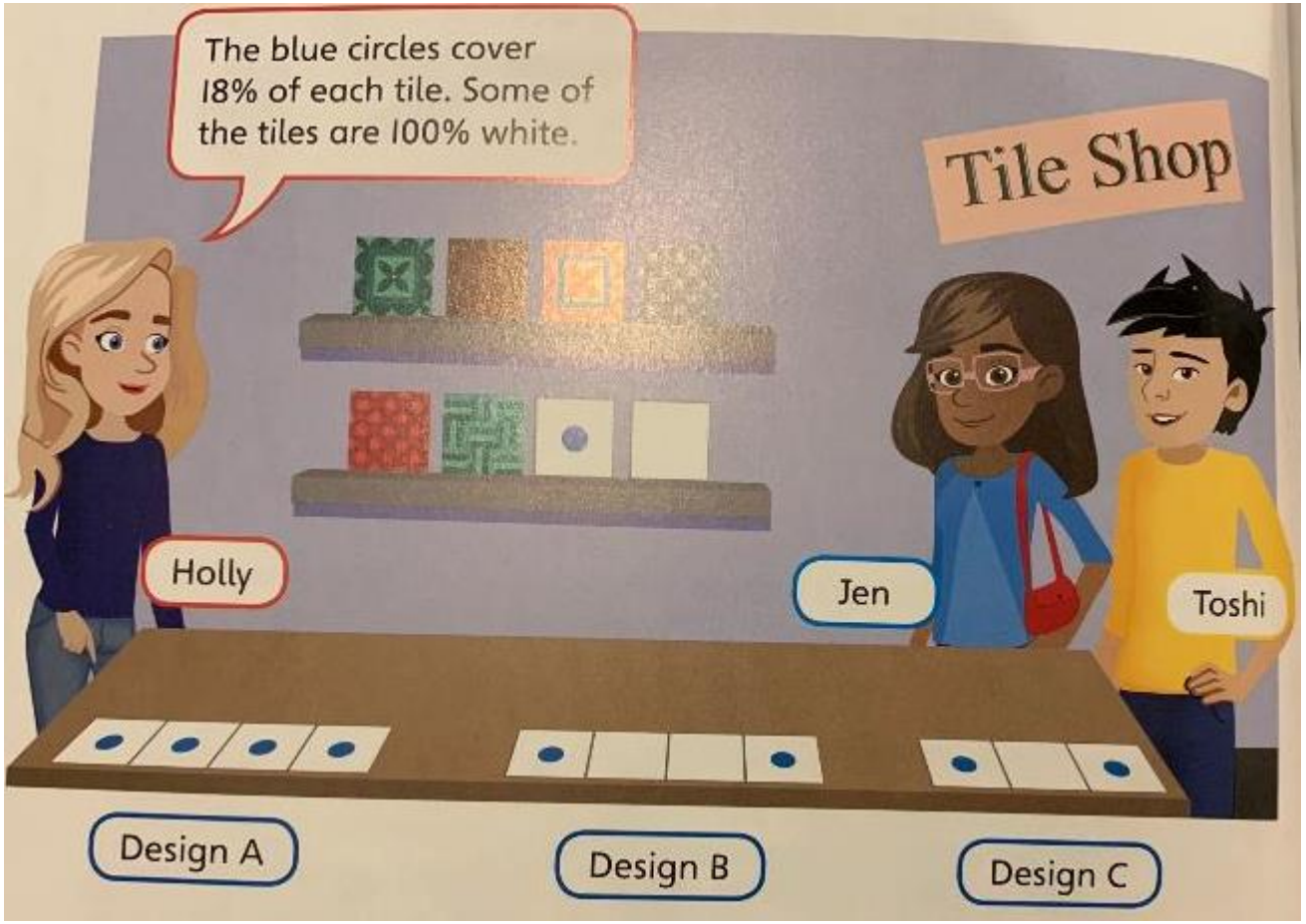


GUIDED PRACTICE

1) What percentage of Design A is blue?

2) Find the percentage of Design B that is blue.

3) Find the percentage of Design C that is blue.



What is the percentage of all the designs together that is blue?

INTELLIGENT PRACTICE

10% of 60 =

25% of 120 =

50% of 300 =

20% of 320 =

How did you solve these?

10% of _____ =6

25% of _____ = 30

50% of _____ = 150

20% of _____ = 64

How did you solve these?

30% of _____ = 18

75% of _____ = 90

40% of _____ = 128

60% of _____ = 192

How did you solve these?

Use equivalent fractions to help you solve these

INTELLIGENT PRACTICE ANSWERS

10% of 60 = 6

25% of 120 = 30

50% of 300 = 150

20% of 320 = 64

How did you solve these?

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How did you solve these?

30% of 60 = 18

75% of 120 = 90

40% of 320 = 128

60% of 320 = 192

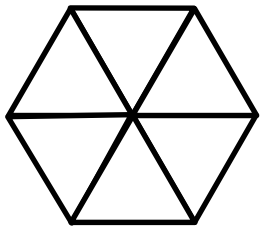
How did you solve these?

Use equivalent fractions to help you solve these

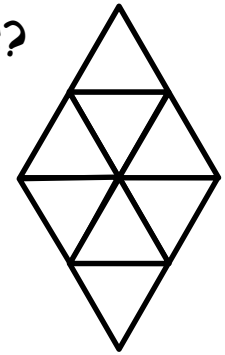
DIVE DEEPER 1

1) This is 15% of the whole shape. How many triangles are in the whole shape?

a) ___ triangles = 15%
So, __ triangles = 5%
5% x __ = 100%
So, __ triangles x __ = __ triangles
___ triangles = 100%



b) What fraction of the whole shape is this?



2) Toshi and Amal each have £40 left. How much money did each have to begin with?

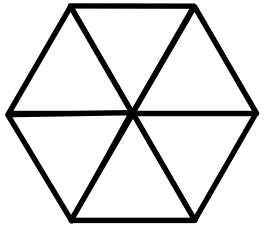
Toshi: I spent $\frac{3}{4}$ of my money.

Amal: I spent 90% of my money.

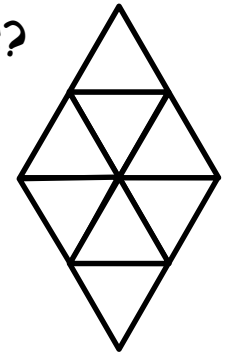
DIVE DEEPER 1 ANSWERS

1) This is 15% of the whole shape. How many triangles are in the whole shape?

a) 6 triangles = 15%
So, 2 triangles = 5%
5% x 20 = 100%
So, 2 triangles x 20 = 40 triangles
40 triangles = 100%



b) What fraction of the whole shape is this?
2 triangles = 5%
Therefore 8 tringles = 20%
20% = $\frac{1}{5}$



2) Toshi and Amal each have £40 left. How much money did each have to begin with?

Toshi: I spent $\frac{3}{4}$ of my money. £160

Amal: I spent 90% of my money. £400

DIVE DEEPER 2

3) Andy buys 3000g of fruit.
$\frac{3}{10}$ of the weight is apples.
45% is bananas.
The rest is grapes.
What is the weight of the grapes?

4) Bella and Richard share some money.

Bella: I have 40% of the money.
Richard: I have £25 more than you

How much money does Richard have?

5) Max scored 45% on the first half of the test and 50% on the second half.
He thinks he scores 95% altogether.

Explain Max's mistake.

DIVE DEEPER 2 ANSWERS

3) Andy buys 3000g of fruit.
$\frac{3}{10}$ of the weight is apples.
45% is bananas.
The rest is grapes.
What is the weight of the grapes? 750g

4) Bella and Richard share some money.

Bella: I have 40% of the money.
Richard: I have £25 more than you

How much money does Richard have? £75

5) Max scored 45% on the first half of the test and 50% on the second half.
He thinks he scores 95% altogether.
Max has added the two percentages together when he should have found 45% of $\frac{1}{2}$ and 50% of $\frac{1}{2}$ and then add them together.
He scored $\frac{95}{200} = \frac{475}{1000} = 47.5\%$

DIVE DEEPER 3

6a) Danny has some clay.

He gives 40% to Bella. He then gives half of what remains to Isla.

Now Danny has 1200 g of clay.

In grams, how much clay does Bella have?

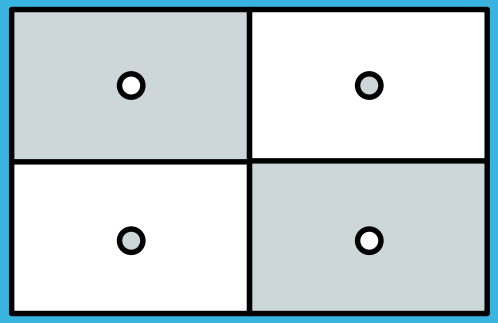
b) Danny and Bella share out some more clay.

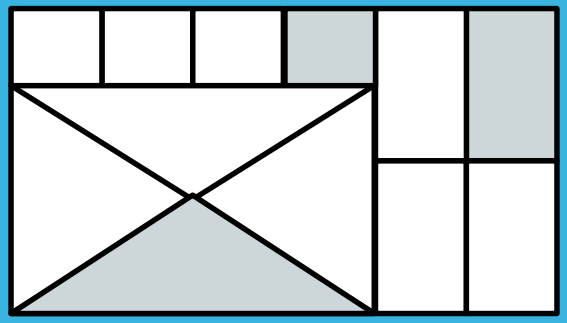
Bella has 45% of the clay and Danny has 1200 g more than her.

In grams, how much clay is there in total?

7) What percentage of each shape is shaded?

Justify your reasoning





SELF-ASSESSMENT

- Some will even be able to think about most efficient methods to solve the problems
- Some will be able to draw suitable bar models to help them solve each type of question
- Most will be able to identify which type of percentage problem it is they are solving
- All will be able to give equivalent fractions and percentages