Reasoning about numbers or shapes

Whole class activity

What pair of numbers gives a sum of 165 and a product of 6806?

Explain how you would do this calculation.

36 x 45

Write down an example that matches this statement.

'If you add up all the angles within a triangle it comes to 180º'

Lesson 2a

1. What 3 numbers could add up to 0.525?

2. Explain how you would do this calculation.

$\frac{5}{20}$ of 360

3. Write down an example that matches this statement.

'If you multiply a number by a half it makes the number twice as small.'

4. Explain how you can work out the number of days in any number of weeks. Write a formula for it.

5. Write down an example that matches this statement.

'If 13.7 < ☐ < 17.9 then any number between 13.7 and 17.9 can go in the box.'

6. Explain how you would do this calculation.
10,010 – 9625

7. What could the missing numbers be?

**6 ÷ ** = 38

8. Write a formula for the perimeter of a regular polygon where the length of the side is 'l' and the number of sides is n. What is the perimeter of a pentagon whose side length is 11cm?

9. Write down an example that matches this statement.

'If you want to multiply a number by 16, multiply it by 4 twice.'

10. Explain how you would do this calculation.

625 ÷ 25

1. What 3 numbers could add up to 0.725?

2. Explain how you would do this calculation.

   $\frac{5}{20}$ of 1360

3. Write down an example that matches this statement.

   'If you multiply a number by a quarter it makes the number four times as small.'

4. Explain how you can work out the number of months in any number of years. Write a formula for it.

5. Write down an example that matches this statement.

   'If 33.7 < _ < 37.9 then any number between 33.7 and 37.9 can go in the box.'

6. Explain how you would do this calculation.

   20,010 – 15,625

7. What could the missing numbers be?

   ***6 ÷ ** = 328

8. Write a formula for the perimeter of a regular polygon where the length of the side is l and the number of sides is n. What is the perimeter of a hexagon whose side length is 12cm?

9. Write down an example that matches this statement.

   'If you want to multiply a number by 36, multiply it by 6 twice.

10. Explain how you would do this calculation.

    3125 ÷ 25

Lesson 2C

1. What 3 numbers could add up to 0.935?

2. Explain how you would do this calculation.

$\frac{5}{20}$ of 3360

3. Write down an example that matches this statement.

'If you multiply a number by a third it makes the number three times as small.'

4. Explain how you can work out the number of months in any number of decades. Write a formula for it.

5. Write down an example that matches this statement.
'If 333.7 < ☐ < 337.9 then any number between 333.7 and 337.9 can go in the box.'

6. Explain how you would do this calculation.

28,010 – 14,625

7. What could the missing numbers be?

****6 ÷ *** = 328

8. Write a formula for the perimeter of a regular polygon where the length of the side is l and the number of sides is n. What is the perimeter of an octagon whose side length is 36cm?

9. Write down an example that matches this statement.

'If you want to multiply a number by 64, multiply it by 8 twice.'

10. Explain how you would do this calculation.

30125 ÷ 25