

## Key Stage 2

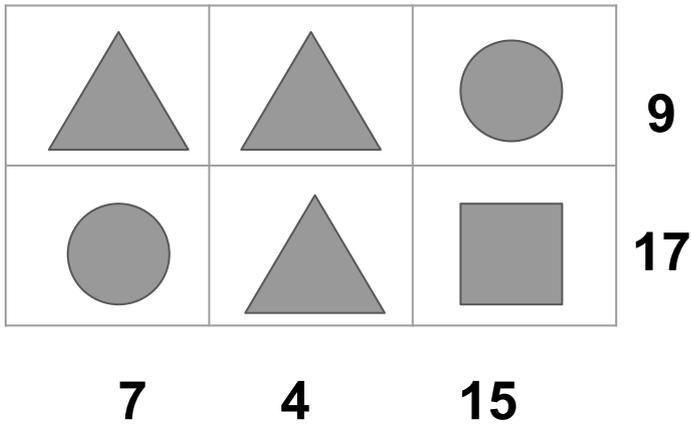
# Algebra

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DFE number						

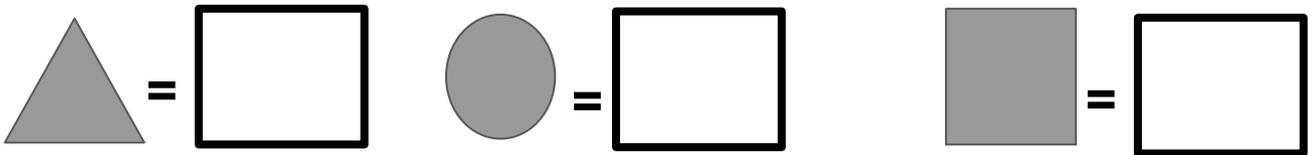
**1**

Each shape in the grid represents a different whole number.

The numbers around the grid show the total value of the shapes in each row or column.

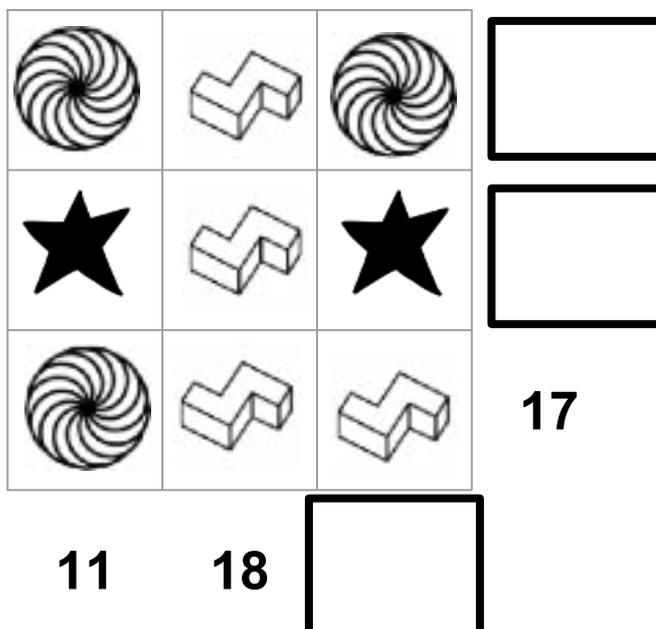


Find the value of each shape.

**2**

The numbers around the grid below show the total value of the shapes in each row or column.

Fill in the three missing totals.



**3**If  $a = 4$  and  $b = 5$ :

Write the value of each expression:

$a + 5 =$

$2b =$

$b - 2a =$

$b^2 =$

$(a+b)^2 =$

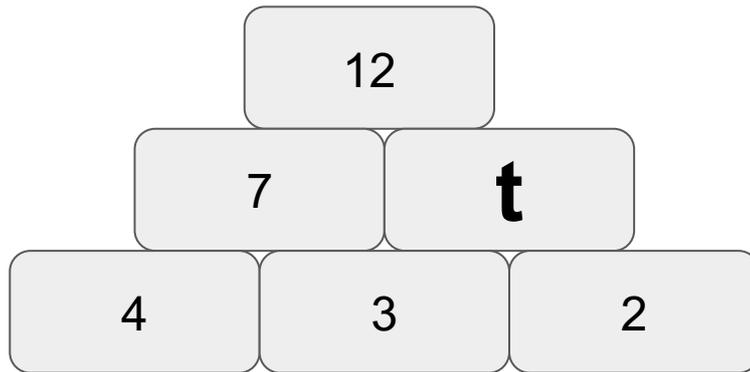
$ab =$

$30 - a^2 =$

$a^3 =$

4

Jack is making a pyramid pattern. Each brick is the total of the two bricks beneath it.



What number should replace the letter t ?

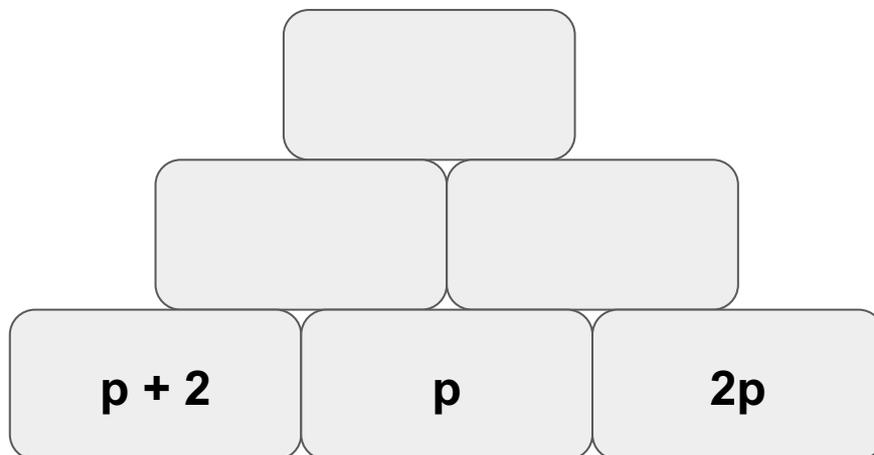
Answer:

t =

1 mark

Hallie is also making a pyramid using the same rule. She is using letters instead of numbers.

Write correct expressions in Hallie's three blank bricks.



3 marks

**5**

Lola has £10. She spends some of her money on a cinema ticket.



$m$  represents the cost (in pounds) of Lola's ticket.

Which expression shows how much money Lola has left?

Tick **one**.

$m + 10$

$m - 10$

$m \times 10$

$10 \div m$

$10 - m$

1 mark

**6**

Complete these number sentences.

One has been done for you.

3 more than  $d$  is

           $d + 3$           

6 less than  $d$  is

\_\_\_\_\_

1 less than half of  $d$  is

\_\_\_\_\_

Half of 2 more than  $d$  is

\_\_\_\_\_

3 marks

**7**

Neave thinks of a number. She calls it 'k'.

Neave worked out that if she tripled her number and subtracted the answer from 40, the result was 4.

**(a)** Put a **tick** next to the equation which best represents what Neave did.

$$3k - 40 = 4 \quad \square$$

$$40 - 3k = 4 \quad \square$$

$$3 + k - 40 = 4 \quad \square$$

$$k \div 3 - 40 = 4 \quad \square$$

1 mark

**(b)** What number did Neave think of? Show your working.

**Answer:**

**k =**

2 marks

**8**

Solve the equation to find the value of p.

$$3p - 4 = 0.5$$

Answer:

 p =

---

2 marks**9**

Solve the equation to find the value of r.

$$4r + 3 = 5r$$

Answer:

 r =

---

2 marks

Thank you for downloading this paper. I hope your Year 6 classes will find it a really useful revision aid. Please check out my new website [ks2sats.co.uk](http://ks2sats.co.uk) for lots more FREE papers on topics such as

- **Decimals**
- **Percentages**
- **Multiplication and division**
- **Angles**
- **Word problems**
- **Ratio and proportion**
- **Transformations**
- **Money**
- **Mass**
- **Length**
- **Area and perimeter, and more.**

The website also has *videos of me working through each paper*, so that once pupils have completed the paper they can get help with any questions that they got wrong, and watch a worked-example of how to solve it correctly!

I'd love to have your feedback, so if you have any requests for papers or questions, just let me know.

Thanks - Andrew Jeffrey



@AJMagicMessage



www.facebook.com/AJMagicMessage

[andrewjeffrey.co.uk](http://andrewjeffrey.co.uk)