Starter

1. Find the following
   a. $8 - 4 \times (-2)$ b. $27 \div (-9) + 1 \times 4$ c. $13 - (3 - (-1))^2$

2. Multiply out the brackets and simplify
   a. $3(x - 4) + 2(3x + 5)$ b. $5k^2 - 4k(6 - 2k)$

3. Find the mode, median and range of the following numbers

   275 268 241 271 239 241 261 254 234 253

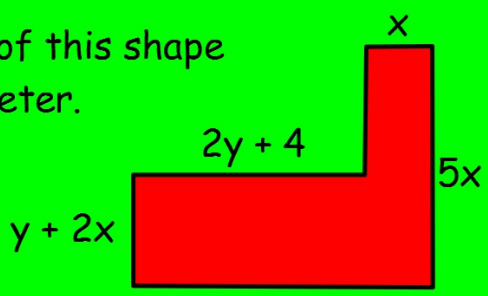
4. Find
   a. 50×145 b. $27 \div 90$ c. 0.02×7000

Starter

1. Calculate
   a. 600 x 0.35 b. 35 ÷ 7000 c. 0.9 x 0.02

2. Multiply out the brackets and simplify
   a. $2x + 4(3x - 1) + 8$ b. $6p(p - 4) - 2(p^2 - 3)$

3. a. Find an expression for the **perimeter** of this shape
   b. If x = 5 and y = 3, calculate the perimeter.



4. Put the following lengths in order, smallest first

   1 m 25 cm, 1.06 m, 1500 mm, 155 cm

Starter

1. Find the following
   a. $16 \times (-1) \div (-2)$ b. $(-1)^2 - 4 \times 5$ c. $(6 + (-1))^2 - 6$

2. Factorise
   a. $8abc + 24ac^2$ b. $27f^2gh - 9fg^2h^4 + 45fg^3h^2$

3. It costs £62.75 to hire a bike for 5 days.
   a. Calculate the cost per day.
   b. How much would it cost to hire the bike for 8 days at the same rate?

4. a. Using the following table, find a formula to calculate temperature in degrees Fahrenheit.

Degrees Celsius	1	2	3	4
Degrees Fahrenheit	33.8	35.6	37.4	39.2

   b. What is the temperature in Fahrenheit when it measures 100°C?

Starter

1. Round to 2 s.f.
   a. 52390 b. 0.06591 c. 159.9

2. Factorise
   a. $21x^3y + 3xy$ b. $81c^2d^3e + 63cd^2e - 18cde^2$

3. The first row in a cinema has 15 seats.
   The second row has 17 seats.
   The third row has 19 seats.
   If it continues in this pattern to the back of the cinema,
   a. Find a formula to describe the number of seats in each row
   b. How many seats are there in the 14th row?

4. The current exchange rate at the Post Office is £1 = $1.575.
   a. How many dollars would you get for £200?
   b. How many pounds would you get for $630?

Starter

1. If $j = (-1)$, $k = 4$, $l = 3$, evaluate the following expressions
   a. $jk^2 - 2j$ b. $2k + (j - l)^3$

2. Solve the following
   a. $8x - 6 = 2x + 10$ b. $4 + 4x = 6x - 1$

3. A new dishwasher costs £280 plus VAT at 17.5%.
   Find the total cost.

4. A regular pentagon has sides $(2x + 7)$ cm long and its perimeter is 65 cm.
   Find the value of x.