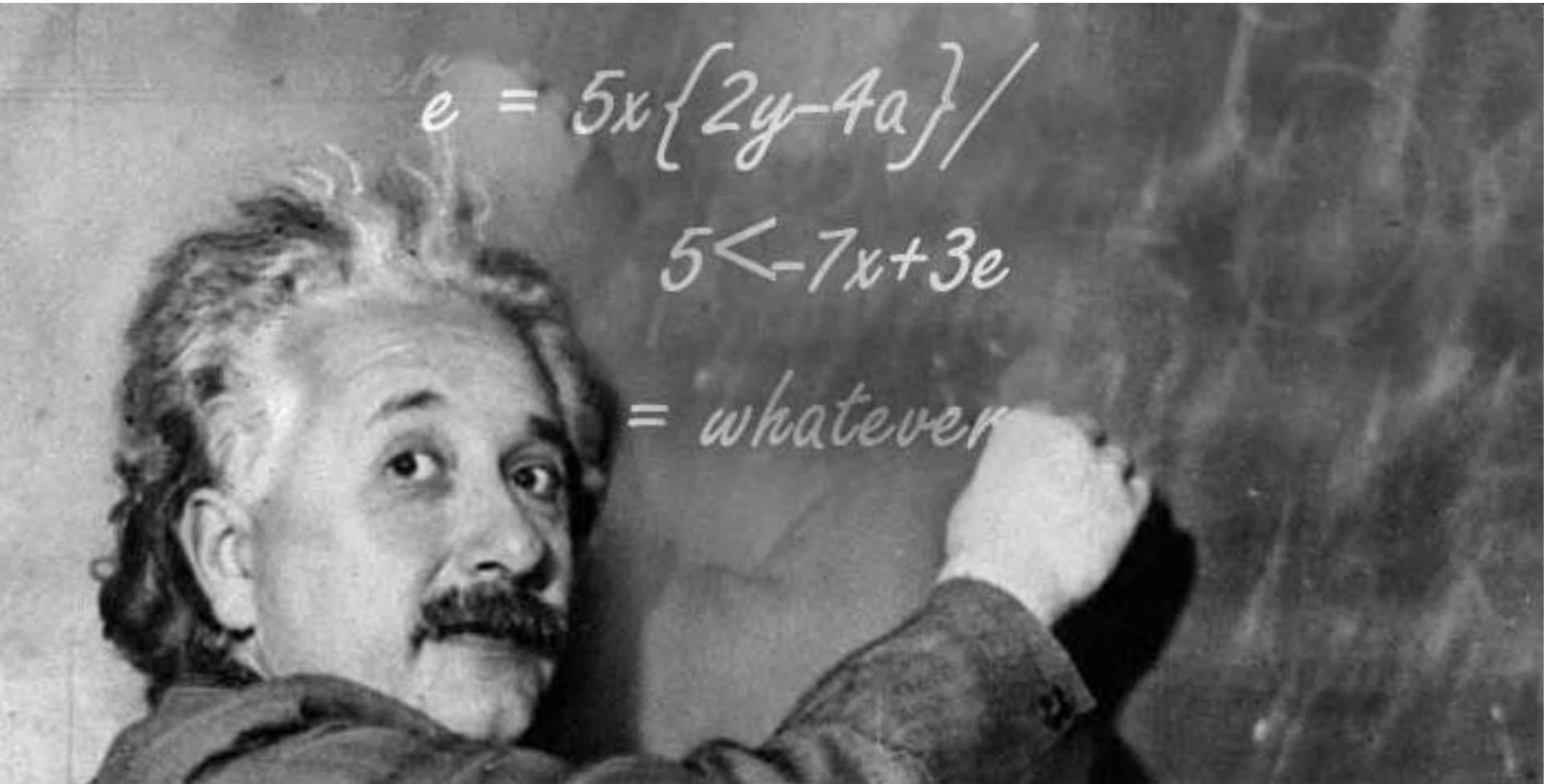


Command Words in GCSE Maths

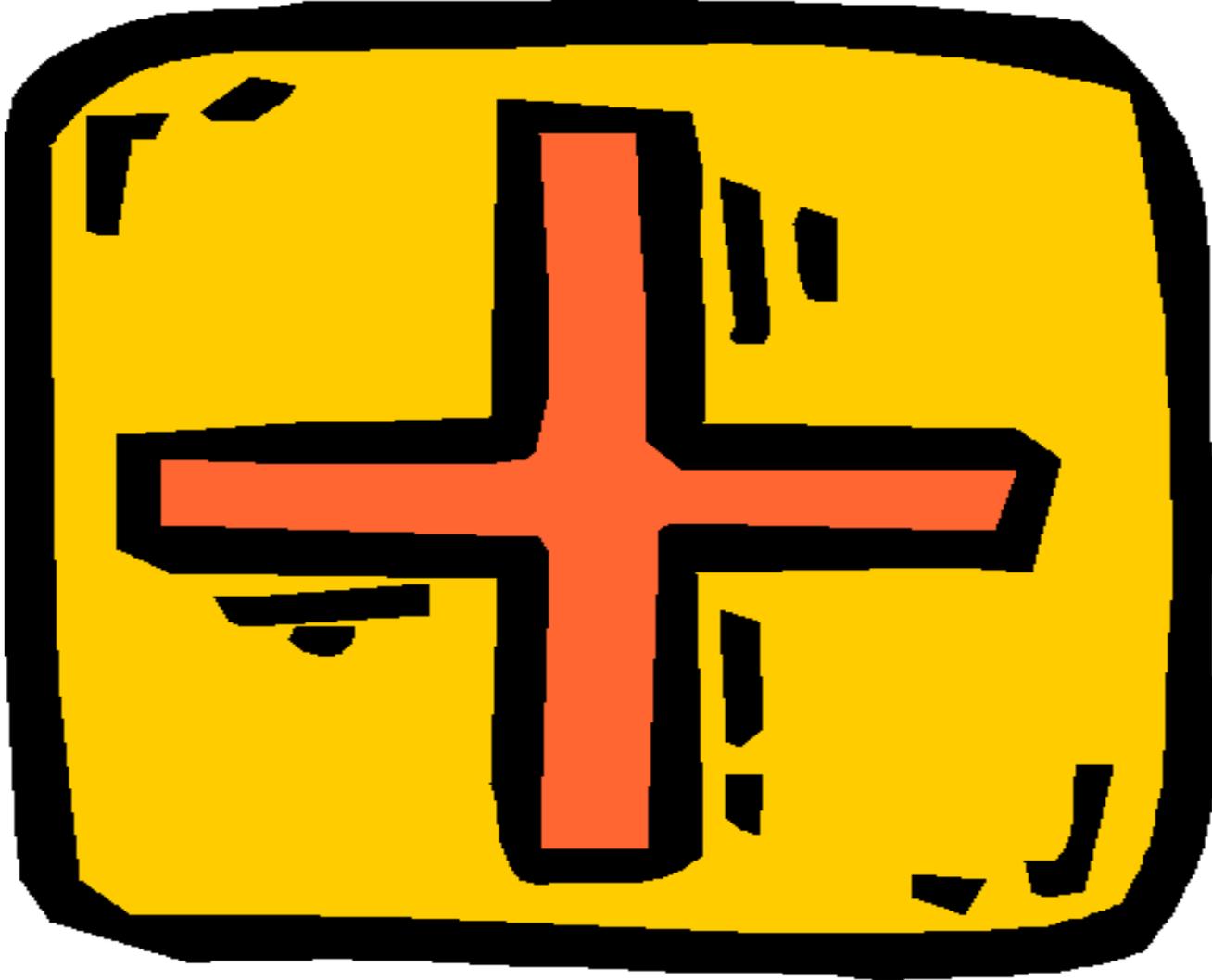


L.O. To know what the command words are asking me to do in a GCSE Maths exam.



Calculate - You are being asked to work out the answer.

Look at the mathematical command e.g. + - x or / and then complete the task.

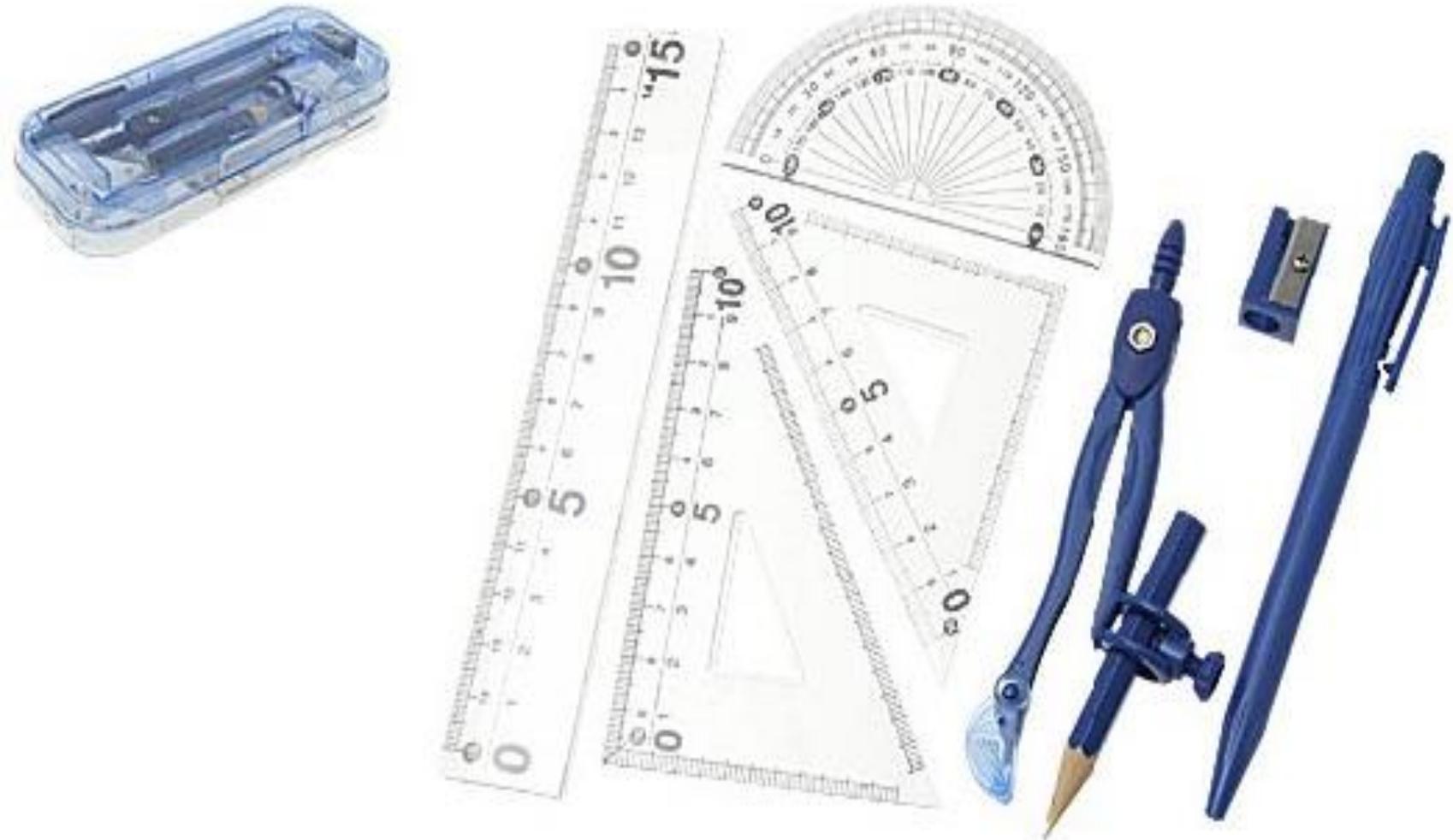


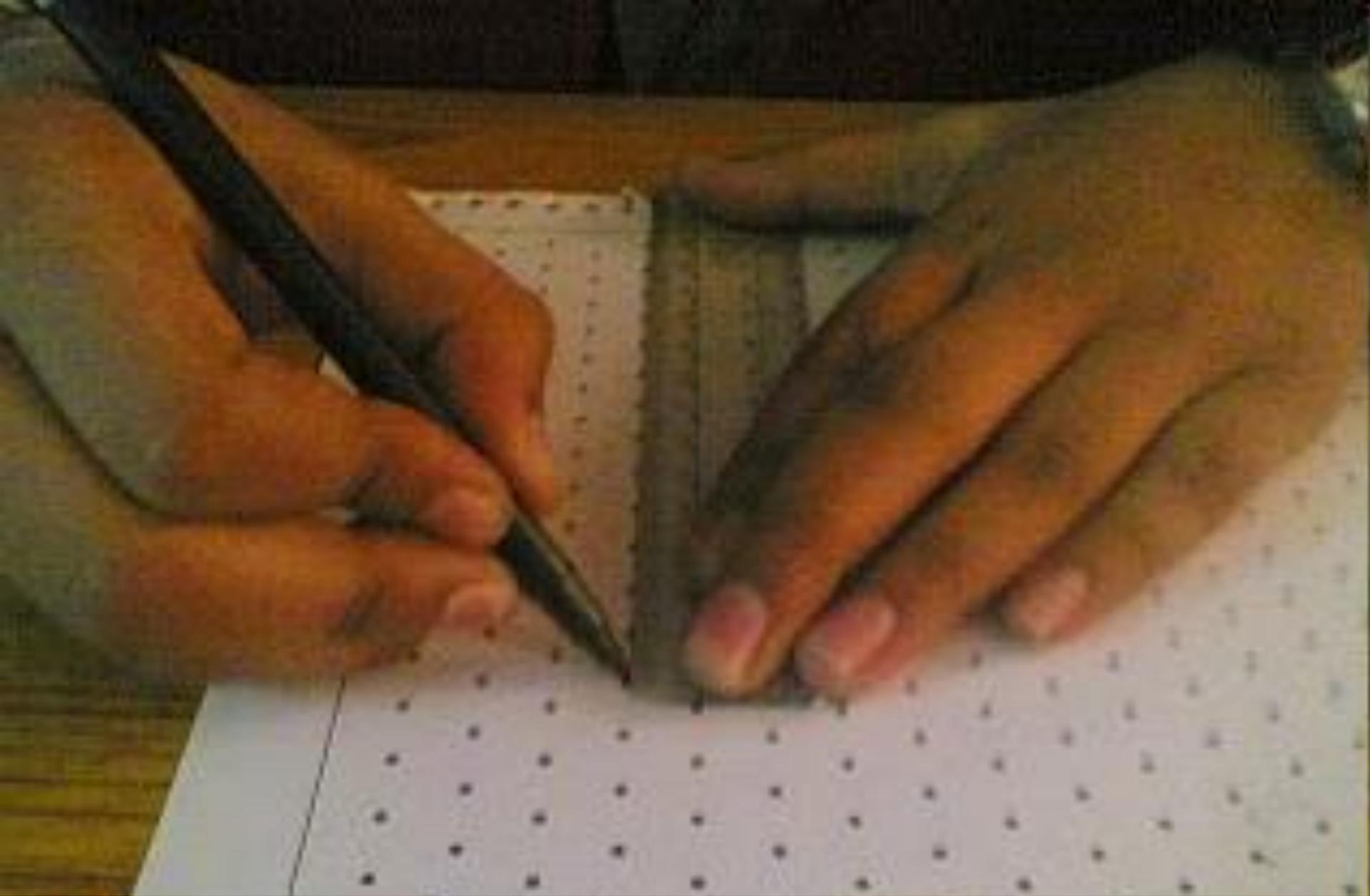
Sum - Add up

Construct - This is telling you to draw accurately.

Use your ruler, pencil, compass, protractor.

Leave all the marks you make on your diagram.





Sketch - Draw roughly - Include key parts, use a ruler.

$$x - 6$$

Expression - Algebra
without an equals sign

Equation

This is algebra with an equals sign.

Step 1: $6h = 18$

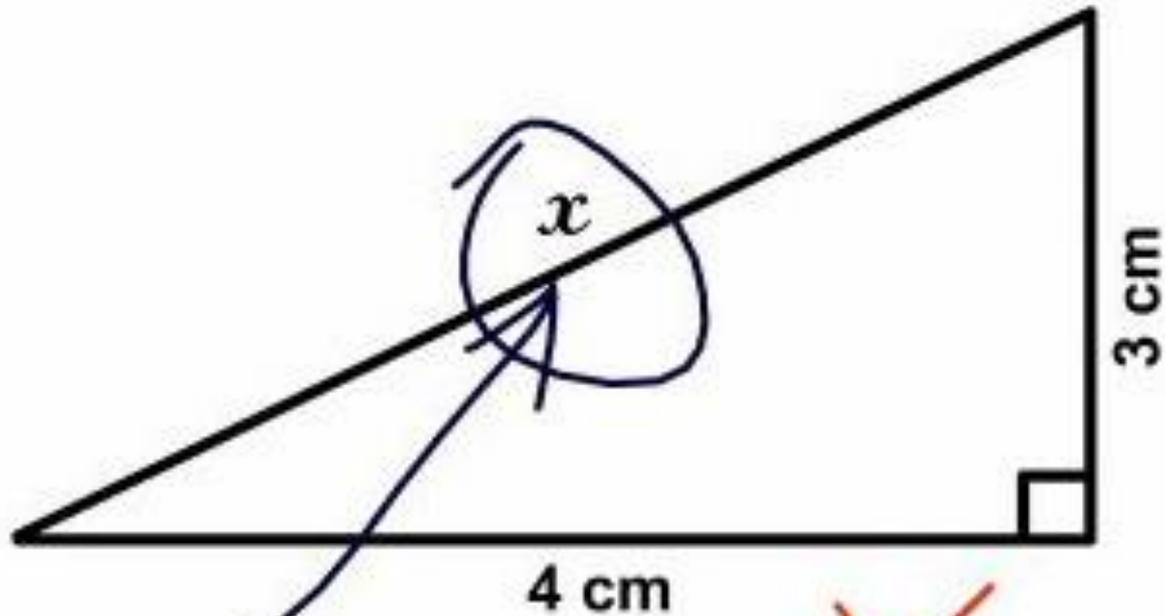
Step 2: $6h = 18$

$\div 6$ $\div 6$

Step 3: $\cancel{6}h = \frac{18 \div 6}{3}$

Step 4: $h = 3$

3. Find x .



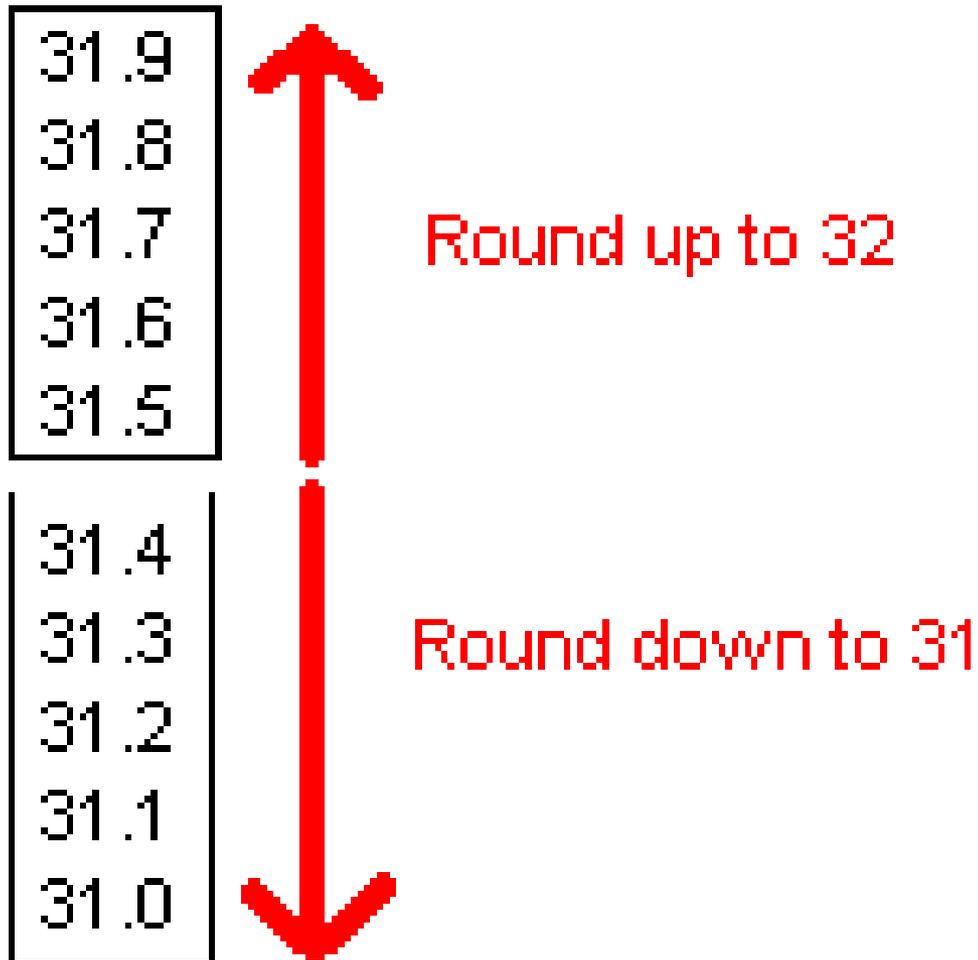
Here it is

X

O

Solve - Work out fully or find out what x is.

Estimate/Approximate -This means round the numbers up or down to the nearest whole number or decimal place and then work out the question.



0.0724591



Suitable degree of accuracy - Round to 1 or 2 decimal places or 3 significant figures

Expand these brackets.

(a) $8(a + 3)$

(c) $-4(e - 7)$

(e) $4(2r - 5)$

(g) $-5(3h + 6j)$

(i) $3f(m - 8)$

(k) $3b(2a + 11)$

(b) $-5(b - 3)$

(d) $f(9 - e)$

(f) $-6(3g - 5)$

(h) $j(2k + 4m)$

(j) $-6n(3 - 7n)$

(l) $5n(12 - 2n)$

Expand - Here you have to multiply out the brackets of an equation.

EXPLAIN

- Tell How
- Put It In Your Own Words



Explain - Give reasons for your answer and always make sure that you show the working out.

Product - Multiply

Quiz-Tree.com presents: Math Games Multiplication

$$10 \times 3 = ?$$

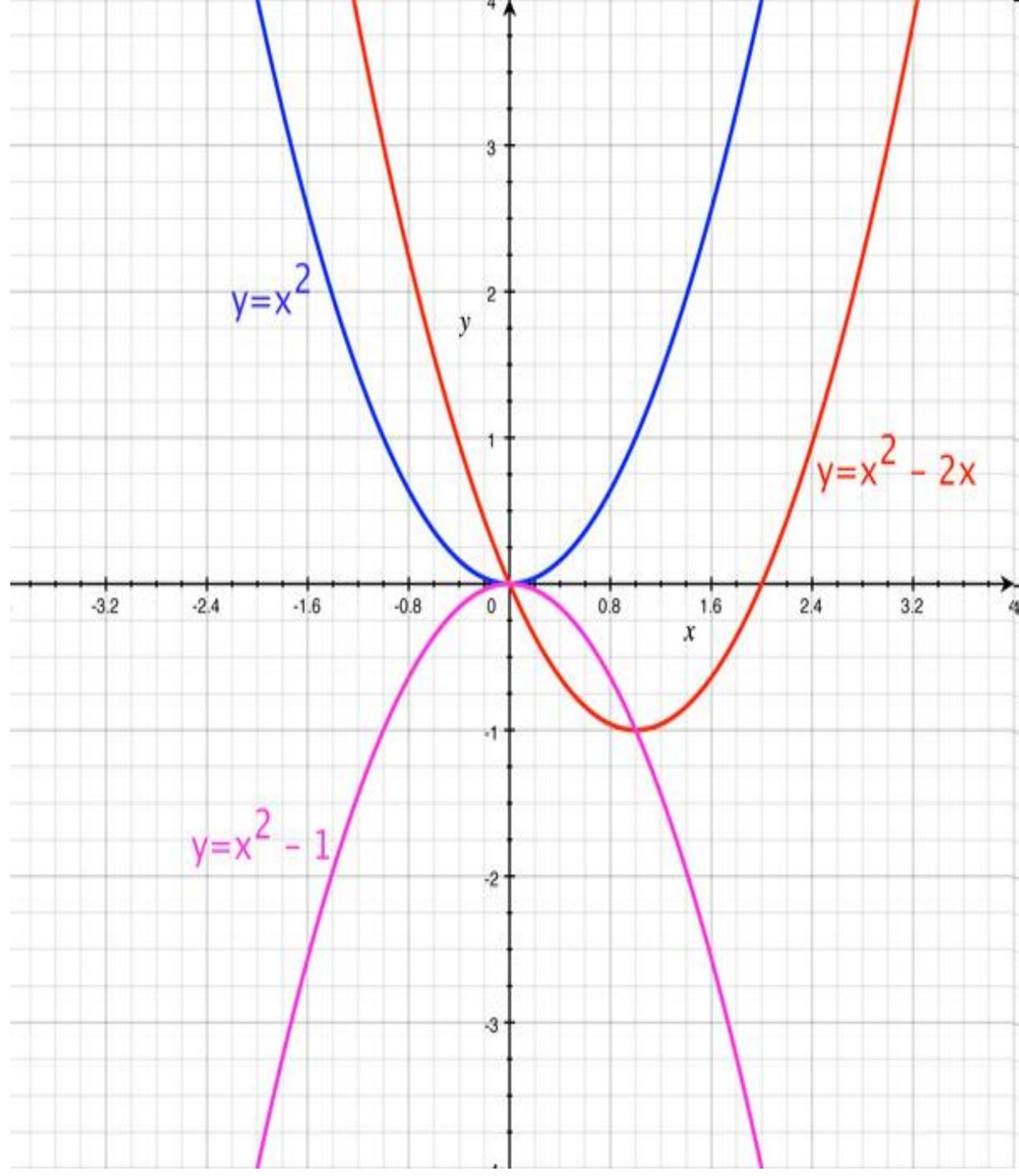


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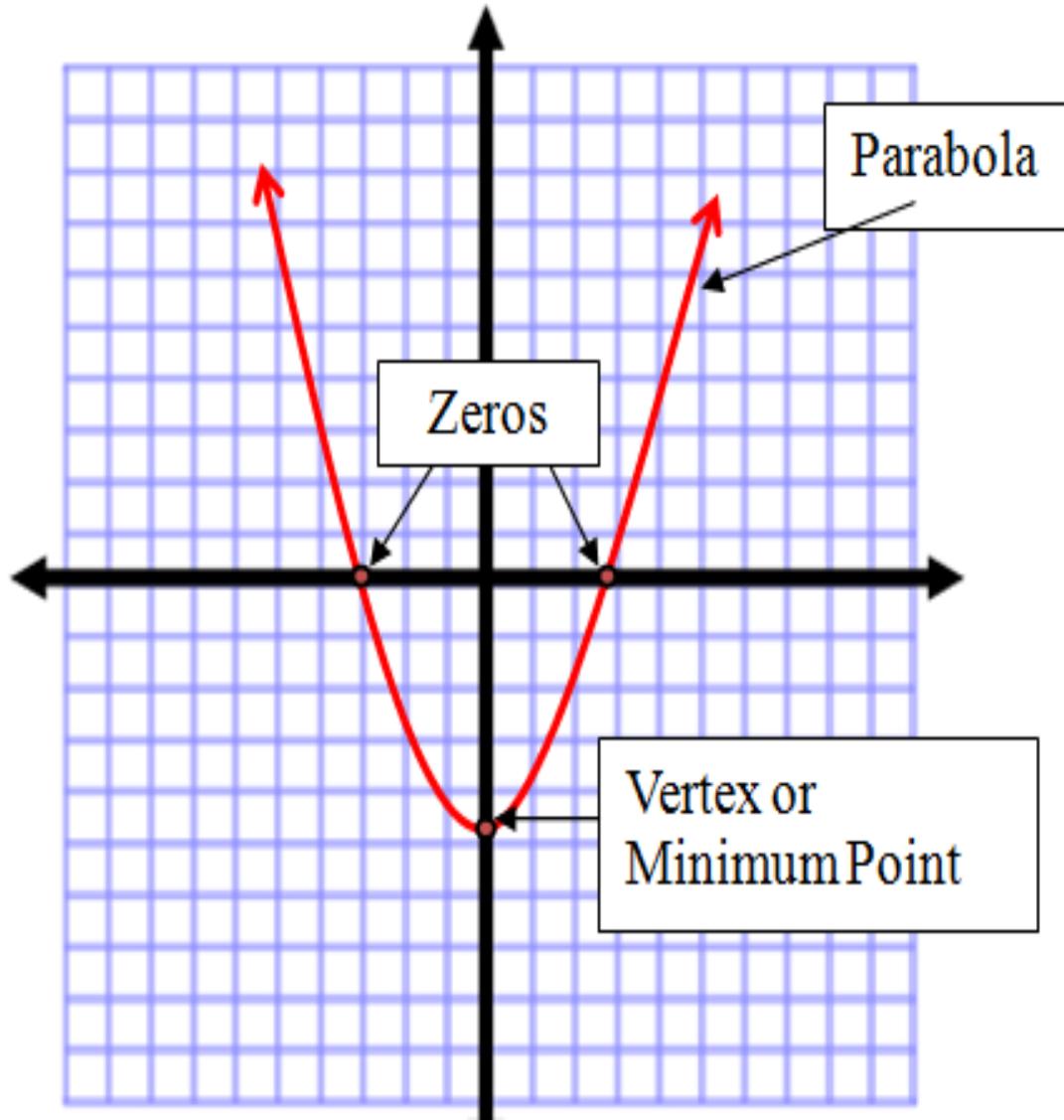
Quadratics –

A curve on a graph and squared in the equation



$$f(x) = ax^2 + bx + c$$

↑
Positive a, so the parabola opens up.



Minimum on a quadratic graph -

The lowest point where the graph turns upwards.

Find the reciprocal of $\frac{3}{4}$.

$\frac{3}{4}$ and $\frac{4}{3}$ are reciprocals since

$$\frac{3}{4} \times \frac{4}{3} = \frac{12}{12} = 1$$

Reciprocal - Divide the number into 1.

Standard Form - Answer must have a number between 1 and 10 multiplied by 10 to the power of something.

$$5319 = 5.319 \times 10^3$$

$$0.0186 = 1.86 \times 10^{-2}$$

$$0.000109 = 1.09 \times 10^{-4}$$

$$412.25 = 4.1225 \times 10^2$$

$$0.000025 = 2.5 \times 10^{-5}$$

$$4002.02 = 4.00202 \times 10^3$$

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Express - Work Out (show)



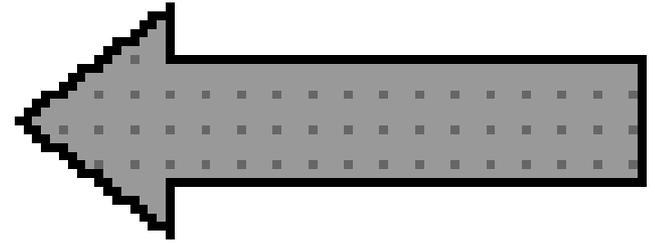
Consecutive – Two numbers that follow each other.

$$3x^2 - 14x + 15 = (3x - 5)(x - 3)$$

	3x - 5	
x	3x ²	-5x
-3	-9x	+15

Factorise - Put in brackets (what number/letter goes into each part) – This is the **opposite** of multiplying brackets

$$\frac{7}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$$



$$\frac{7\sqrt{3}}{3}$$

3

Rationalise - Multiply the top and bottom by the denominator