

Solving Algebraic Equations by crossing over the Bridge

What is an Algebraic Equation?

In real life Algebraic Equations are hidden, yet get used daily. Some examples are :-

I have \$2.40 change from \$5 after buying two cans of Pepsi. How much does a can cost?

I have to paint my room of 50 m^2 and each 4 litre can of paint covers 6 m^2 . How many cans of paint do I need?

The list is endless, so how much does a can of Pepsi cost?

Lets begin!

What is this? 

Now what does it look like?

This is our bridge to solving equations.

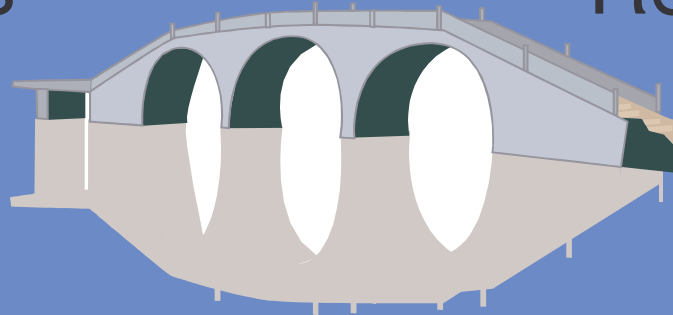
So if we have a bridge, what else must we have?

Sydney

Melbourne

Pronumerals

Real numbers



Just like in real life we use bridges to get from one side to the other, but in our case we have to do the five question test.

1. Is 'x' on its own?

Eyes

2. What is stopping it being on its own?

Eyes

3. Which thing is furthest away from the 'x'?

Eyes

4. What mathematical operation is it doing?

Eyes and knowledge

5. What is the opposite mathematical operation?

Mathematics knowledge

Lets look at how this works

Find the value of x if

$$x + 3 = 7$$

$$x = 7 - 3$$

$$x = 4$$

Solve the following equation

$$2x - 10 = 32$$

$$2x = 32 + 10$$

$$2x = 42$$

$$x = 42 \div 2$$

$$x = 21$$

One more for the road

Solve the following equation

$$\frac{3.6x}{1.4} + 11.2 = 21.5$$

$$\frac{3.6x}{1.4} = 21.5 - 11.2$$

$$\frac{3.6x}{1.4} = 10.3$$

$$3.6x = 10.3 \times 1.4$$

$$3.6x = 14.42$$

$$x = 14.42 \div 3.6$$

$$x = 4$$