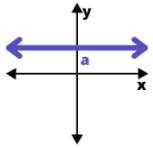
Helpful websites: www.corbettmaths.com, www.mathsgenie.com, www.sparxmaths.uk

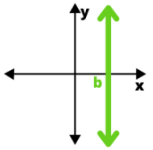
Equation of a Horizontal Line

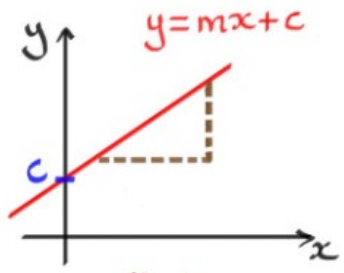
$y=a$



Equation of a Vertical Line

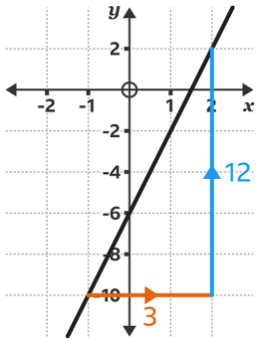
$x=b$





gradient

$12 \div 3 = 4$



Solving a Two-Step Equation

$3b-4=11$

$+4 \quad +4$

$3b=15$

$\frac{3b}{3}=\frac{15}{3}$ (5)

$b=5$

Check: $3(5)-4 \stackrel{?}{=} 11 \quad 15-4 \stackrel{?}{=} 11 \quad 11=11$ ✓

Solving a Two-Step Inequality

$2x - 8 \geq 5$

$2x - 8 + 8 \geq 5 + 8$ — Step 1: Use inverse of subtracting 8.

$2x \geq 13$

$\frac{2x}{2} \geq \frac{13}{2}$ — Step 2: Use inverse of multiplying by 2.

$x \geq 6.5$ — Solution

Factors, multiples and primes are different types of numbers.

- A **factor** is a number which divides into another number exactly with no remainders.
- A **multiple** of a number is a number in its times table.
- A **prime number** is a number that only has two factors, 1 and itself.

Counterexample: Show something is not true by finding one false example.

Is it true that $n^2 - n - 1$ is always prime?

No, because $8^2 - 8 - 1 = 55$ which is not prime.

Mathematical Language:

Parallel, horizontal, vertical, perpendicular
Straight line, curve
Graph, axis, axes
Equation, inequality, formula, function, greater/less than (or equal)
Gradient, y-intercept, slope, steep, positive, negative
Linear
Table of values
Coordinate
Rearrange, simplify
Inverse proportion, reciprocal
Asymptote
Interpret
Solution, solve, satisfy, balance
Unknown
Inverse, reverse, inverse operation
Expand, factorise
Coefficient, variable, constant
Check, substitute
Rearrange, make the subject of
Square, square root
Factor, multiple, prime, common, odd, even, express
Conjecture, true, false, verify, counterexample, demonstrate, prove
Binomial, quadratic
Term, expression

MATHS IS EVERYWHERE