(recap)

Solving Equations

$2x + 7 = 20$

$2x = 20 - 7$

$2x = 13$

$x = 6.5$

$3(x+8) = 33$

$3x + 24 = 33$

$3x = 33 - 24$

$3x = 9$

$x = 3$

$3x + 5 = 21 - x$

$4x = 21 - 5$

$4x = 16$

$x = 4$

$6x - 2 = 1$

$6x = 1 + 2$

$6x = 3$

$x = \frac{1}{2}$

$12 - 2x = 10$

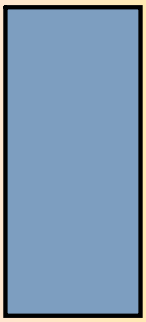
$12 = 10 + 2x$

$12 - 10 = 2x$

$2 = 2x$

$1 = x$

Rearranging Formulae



$A = 28cm^2$

$$\text{Speed} = \frac{\text{distance}}{\text{time}}$$

Find the
a) speed, if d = 30km and t = 2hrs
b) distance, if speed = 50km/h and t = 2hrs
c) time if s= 45km/h and d = 135km

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video (14 mins)

Changing the Subject of a formula

$y = x + 3$

In this equation y is the subject

$y - 3 = x$

$x = y - 3$ ← x is the subject

$y = x - 5$

$y + 5 = x$

Make x the subject

$4y = 2x$

$2y = x$

$4y \div 2 = x$ $(4y \div 2)$

$2y = 3x - 1$

$2y + 1 = 3x$

$\frac{2y+1}{3} = x$

$x = \frac{2y+1}{3}$

$4t + 5 = 3x - 1$

$4t + 6 = 3x$

$\frac{4t+6}{3} = x$

$14\pi = 4x$

$\frac{14\pi}{4} = x$

$x = \frac{14\pi}{4} = \frac{7\pi}{2}$

$3(x+7) = 42$

Page 66 evens only and B11.

Make x the subject:

1) $y + x = 6$

$x = 6 - y$

2) $y + 2x = 6$

$6 - y$

$2x = 6 - y$

$x = \frac{6-y}{2}$

3) $2y + 2x = 6$

$2x = 6 - 2y$

$x = \frac{6-2y}{2} = 3 - y$

4) $2y - 2x = 6$

$2y - 6 = 2x$

$y - 3 = x$

5) $x + y = z$

$x = z - y$

6) $x - z = y$

$x = y + z$

Solving equations

Fill in the blanks

$2x + 3 = 9$

$2x = 9 - 3$

$2x = 6$

$x = 6 \div 2 = \frac{6}{2}$

$x = 3$

$10x - 15 = 10$

$10x = 10 + 15$

$10x = 25$

$x = 25 \div 10$

$x = 2.5$

$12 - 2x = 6$

$12 = 6 + 2x$

$12 - 6 = 2x$

$6 = 2x$

$3 = x$

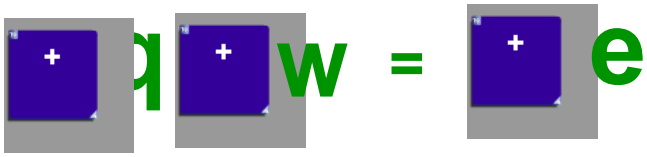
A new look at your abc

$$a+b=c$$

$a = c - b$

$b = c - a$

q+w=e



Changing the subject

20th March

Using cards make
i) x the subject
ii) y the subject
iii) z the subject

1. x+y = z
2. x- y = z
3. x+z = y
4. z- x = y
5. y- z = x
6. y- x = z

i) $x = z - y$

ii) $y = z - x$

iii) $z = x + y$

Changing the Subject

Make a the subject:

1) a+ b = c $a = c - b$

2) 2a + b = c $2a = c - b$, $a = \frac{c-b}{2}$

3) 2a + 2b = c

4) 2a - 3b = 4c $3)\ 2a = c - 2b$, $a = \frac{c-2b}{2}$

5) 5b - 2a = c

$4)\ 2a - 3b = 4c$

$2a = 4c + 3b$

$5)\ 5b - 2a = c$

$5b = c + 2a$ $a =$

$5b - c = 2a$

$\frac{5b-c}{2} = a$

Using values to check:

eg a=1, b=2

$\frac{4c+3b}{2}$

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Changing the Subject

Make a the subject:

1) a- b = c

$a - b = c$

$a = c + b$

2) 2a - b = c

$2a = c + b$

$a = \frac{c+b}{2}$

3) 2b - 6a = c

4) 2a + 3b = 4c

$2a + 3b = 4c$

$2a = 4c - 3b$

$a = \frac{4c-3b}{2}$

5) 4b - 7a = c

$4b = c + 7a$

$4b - c = 7a$

$\frac{4b-c}{7} = a$

$a = \frac{4b-c}{7}$

$a = \frac{8-1}{7} \rightarrow \frac{7}{7} = 1$ ✓

Using values to check:
eg a=1, b=2

$4b - 7a = c$

$8 - 7 = c$

$1 = c$

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