June 9th	5-a-day	Numeracy
A petrol gauge shows a fuel tank is $\frac{5}{9}$ full. What fraction has been used?	$\frac{4}{9}$	
There are eight tutor groups in Yr7. There are 288 students in Yr7. If there are the same number of students in each tutor group, how many students are in each one?	$8\overline{)288}$ 036	36
Victor is x years old. David is four years younger than Victor, Write an expression for David's age $x-4$	Nicky is half of Victor's age. Write an expression for Nicky's age. $\frac{x}{2}$	
$\frac{5}{9} \times 27$	$\frac{5}{9}$ of 27 15	
A ticket for a concert costs £15 each. What is the cost of 30 tickets?	15x30 £450	

June 9	5-a-day	Foundation

Expand

$p(p + 5)$

p^2+5p

Expand

$a(b + c)$

$ab+ac$

Find the length of BC

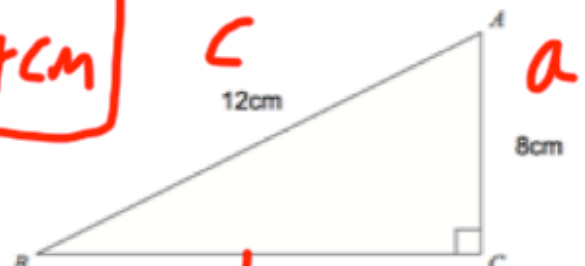
$a^2+b^2=c^2$

$8^2+y^2=12^2$

$64+y^2=144$

$y=\sqrt{80}$

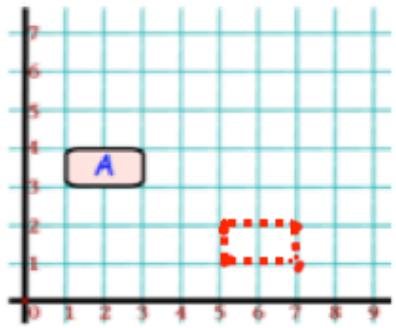
$8.94cm$



c a b

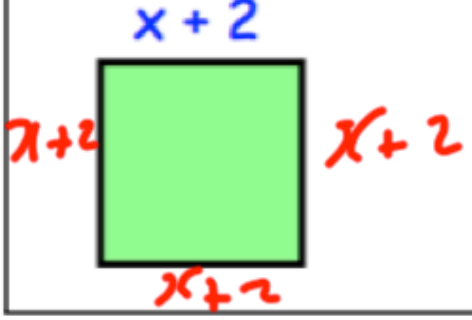
$x > -2$

Write down the inequality shown above



Translate A by vector

$\begin{pmatrix} 4 \\ -2 \end{pmatrix}$ 4 right 2 down.



A square has perimeter 32cm.
It has side length x + 2 cm.

Calculate x

$4x+8=32$

$4x=24$

$x=6cm$

or

$32\div4=8$

$8-2=6$

$6cm$

June 9	5-a-day	Higher

$1\frac{4}{5} \div \frac{3}{4}$

$\frac{9}{5} \div \frac{3}{4}$

$\frac{9}{5} \times \frac{4}{3} = \frac{36}{15}$

$2\frac{6}{15}$ or $2\frac{2}{5}$

3 DVDs and 4 CDs cost £72.

5 DVDs and 2 CDs cost £64.

What would 4 DVDs and 7 CDs cost?

$3x + 4y = 72$

$5x + 2y = 64 \quad \times 2$

$10x + 4y = 128$

$3x + 4y = 72$ sub

$2x = 56$

$x = 8$ DVD

$3(8) + 4y = 72$

$24 + 4y = 72$

$4y = 48$

$y = 12$ CD

$4 \times 8 + 7 \times 12 =$

£116

A cube has the same volume as the cone. Calculate the side length of the cube.

$\frac{1}{3} \times \pi \times 5^2 \times 12$

$= 314.159\ldots$

$x^3 = 314.159\ldots$

$x = \sqrt[3]{314.159\ldots}$

$x = 6.79$

Expand and simplify

$(\sqrt{10}+4)(\sqrt{10}-4)$

$10 - 4\sqrt{10} + 4\sqrt{10} - 16$

-6