Forming algebraic expressions and solving equations – www.m4ths.com

Starter! Solve the equations below

$3p - 1 = 5$	$2 + 5n = 22$	$4n + 7 = 67$
$y + 2y + 4 = 40$	$2(p - 4) = 8$	$3p - 1 = 2p + 1$

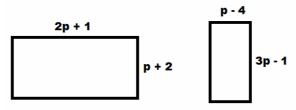Questions!

(1) Pens cost **y** pence each and pencils cost **z** pence each. Write and expression for the cost of 6 pens and 3 pencils.
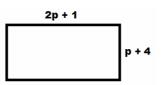
(2) John is **n** years old. Fred is **twice** John's age. Sue is **3 years younger** than John. Complete the table below.

John	Fred	Sue
n		

(3) Fill out the missing sides on each of the rectangles below and write and expression for the perimeter of each rectangle in terms of p
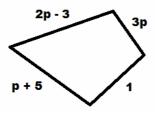

(4) The **perimeter** of the rectangle below is **70cm**, Set up an equation using the information given.

(5) Fred is **t** years old. Bobs is **3 times** his age. Jane is **2 years older** than Bob. Their combined age is 37. Set up and equation using the information given.

(6) Pens cost y pence each. Pencils cost 5p each. Bill buys 10 pens and 4 pencils. The total cost is 80p. Set up an equation using the information.

(7) Below is a picture of a race track. The distance around the track is 63 miles. Set up and solve an equation first to find p and then use that information to find the length of each side of the track.

(8) In a game the player scores y points for a direct hit and 4 less for a near miss. Bob manages 5 direct hits and 2 near misses. His total score is 76. Find out the number of points given for a direct hit and a near miss.

(9) Sue is 2n years old. Fred is 3 years older than Sue and Jim is half Sue's age. Their combined age is 48. Find the age of each person by setting up and solving an equation.

(10) Bob sits 3 exams. In the first one he scores m marks, in the second he scores 1 less than double his first score. In the final exam he scores 32 marks. His total score is 91 over the 3 exams. Set up and solve an equation to find the score he achieved in the first two exams.