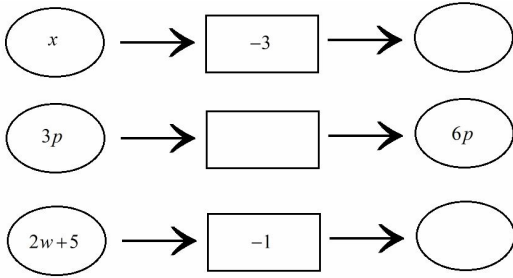
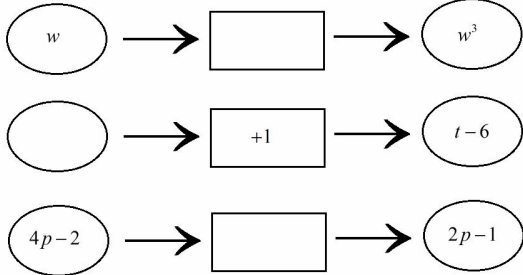


**Function Machines (Expressions/Equations)** www.m4ths.com

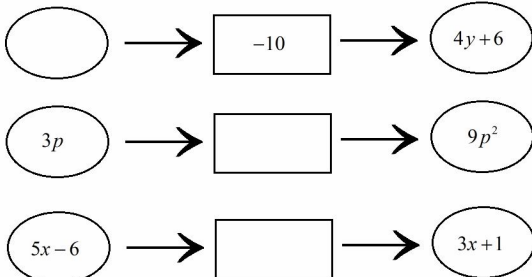
(1) Complete each of the 3 function machines below.



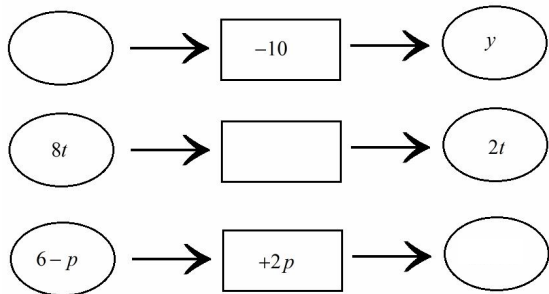
(2) Fill out the blanks in the 3 function machines below.



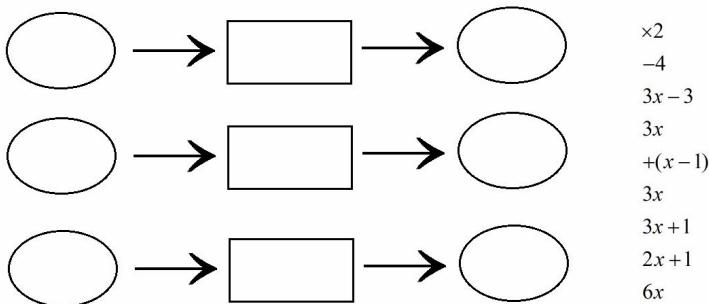
(3) Complete each of the 3 function machines below.



(4) Fill out the blanks in the 3 function machines below giving two different answers for the second machine.



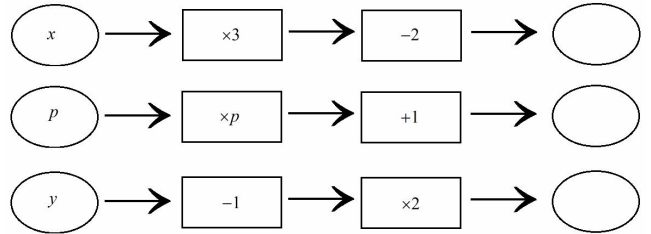
(5) Fill the 3 function machines below using the 9 calculations and expressions on the right such that each holds true.



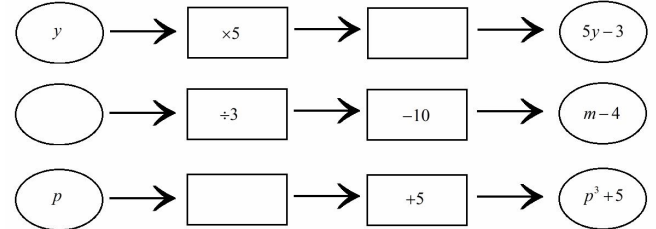
(6) Draw a function machine to map each of the following:

- (a)  $x - 1 \rightarrow x + 5$
- (b)  $y + 6 \rightarrow y - 1$
- (c)  $\sqrt{x} \rightarrow x$
- (d)  $3x - 1 \rightarrow 5 - x$

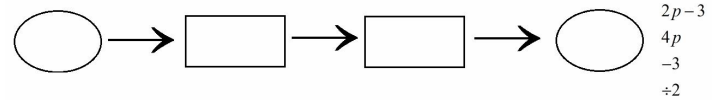
(7) Complete each of the 3 function machines below.



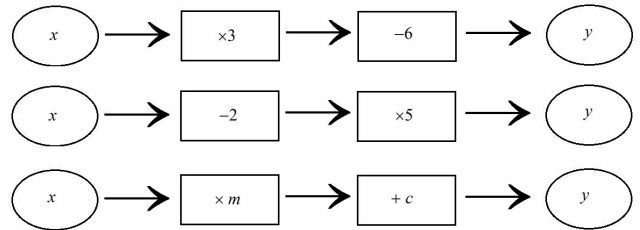
(8) Fill out the blanks in the 3 function machines below.



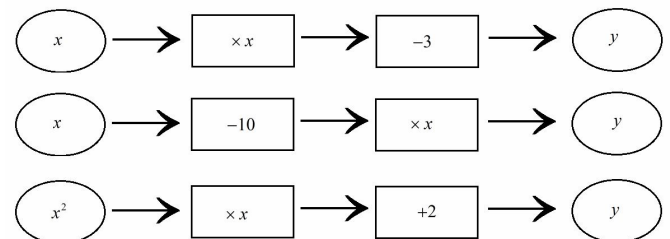
(9) Complete the function machine using the 4 options on the right.



(10) Write down the linear function each machine produces.



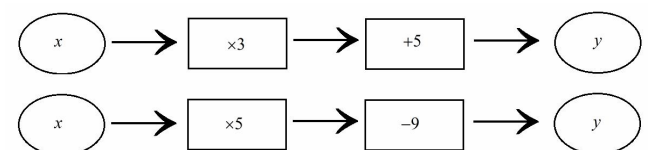
(11) Write down the function each function machine produces and state whether it's linear, quadratic or cubic.



(12) Draw a function machine to map each of the following:

- (a)  $y = 2x^2$
- (b)  $p = 2q - 3$

(13) Fred says there is one number he inputs into both the function machines below that gives him the same output. What number is that?



(14) The graph of a linear function passes through the points (1,1) and (4,10). Complete the machine below to represent this function.

