

Algebraic Proof with Multiples

(a)	(b)	(c)
Show that $4(x + 3) + x - 2$ is always a multiple of 5	Show that $3(7 + 2x) - 9$ is always a multiple of 6	Show that $4(x + 7) + 2(1 - x)$ is always a multiple of 2
(d)	(e)	(f)
Show that $7(2x - 1) - 5(x - 2)$ is always a multiple of 3	Show that $(x + 7)(x - 2) - x^2 - 1$ is always a multiple of 5	Show that $(x + 8)(x + 1) - x(x + 5)$ is always a multiple of 4
(g)	(h)	(i)
Show that $(x + 5)^2 + (x - 3)^2$ is always a multiple of 2	Show that $(3x + 5)(2x - 1) + (2x + 1)(x + 1)$ is always a multiple of 4	Show that $(3x + 2)^2 - (x + 4)(3x - 2) + 4(x - 3)$ is always a multiple of 6