

a)
Expand and simplify $(x+1)(x-1)(x+2)$

$$(x+1)(x-1)(x+2)$$

	x	+1
x	x^2	+x
-1	-x	-1

$$x^2 + x - x - 1$$

$$(x+1)(x-1) = x^2 - 1$$

$$(x^2 - 1)(x + 2)$$

	x^2	-1
x	x^3	-x
+2	$+2x^2$	-2

$$x^3 + 2x^2 - x - 2$$

b)
Expand and simplify $(x+1)(x-2)(x+2)$

$$(x+1)(x-2)(x+2)$$

	x	+1
x	x^2	+x
-2	-2x	-2

$$x^2 + x - 2x - 2$$

$$(x+1)(x-2) = x^2 - x - 2$$

c)
Expand and simplify $(x+3)(x-3)(x+5)$