More Surds! ***STRICTLY NON CALCULATOR***
Name_____

FULLY simplify the following

$\sqrt{12}$	$\sqrt{18}$	$\sqrt{27}$	$\sqrt{36}$
$\sqrt{45}$	$\sqrt{50}$	$\sqrt{32}$	$\sqrt{28}$

Simplify fully (and that means fully!)

$\sqrt{a}\times\sqrt{a}$	$\sqrt{4}\times\sqrt{4}$	$\sqrt{3}\times\sqrt{12}$
$2\sqrt{3}\times\sqrt{3}$	$3\sqrt{2}\times4\sqrt{3}$	$\sqrt{8}\times\sqrt{3}$

Simplify fully (where possible)

$2\sqrt{2}+3\sqrt{2}$	$\sqrt{3}+4\sqrt{3}$	$5\sqrt{6}-\sqrt{6}$
$\sqrt{12}+2\sqrt{3}$	$2\sqrt{27}+2\sqrt{3}$	$\sqrt{45}-2\sqrt{5}$
$\sqrt{5}+2\sqrt{6}$	$\sqrt{72}+2\sqrt{2}$	$5\sqrt{7}-5\sqrt{7}$

Expand and simplify

$2(\sqrt{3}-1)$	$\sqrt{3}(1+\sqrt{3})$	$-3(1-\sqrt{2})$
$\sqrt{5}(\sqrt{45}-\sqrt{5})$	$\sqrt{2}(\sqrt{2}+2\sqrt{5})$	$2(x-7)$

Expand the double brackets and FULLY simplify

$(x+1)(x-2)$	$(2x+1)(x+3)$	$(1+\sqrt{3})(1+\sqrt{2})$
$(2-\sqrt{2})(3+\sqrt{2})$	$(\sqrt{2}+1)(4+\sqrt{3})$	$(\sqrt{a}-b)(\sqrt{a}+b)$

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