Math worksheet on *'Radicals - Multiplying Binomials (Values Only) (Level 1)'*. Part of a broader unit on *'Radicals - Multiplication Intro'*

Learn online: app.mobius.academy/math/units/radicals_multiplication_intro/

1 Multiply the radical expressions and simplify the answer

$$(\sqrt{11}+5)\cdot(\sqrt{7}+3)$$

a	$\sqrt{77}+3\sqrt{11}+5\sqrt{7}+15$	**b**	$-4+3\sqrt{11}-15$
c	$3\sqrt{77}-3\sqrt{11}+\sqrt{7}+15$	**d**	$\sqrt{77}+\sqrt{2}+5\sqrt{7}+15$
e	$\sqrt{77}+18+\sqrt{7}$	**f**	$16+3\sqrt{11}-5\sqrt{7}$

2 Multiply the radical expressions and simplify the answer

$$(2+\sqrt{5})\cdot(4-\sqrt{2})$$

a	$5-4\sqrt{5}-5\sqrt{2}+\sqrt{10}$	**b**	$8-5\sqrt{5}-2\sqrt{2}-3\sqrt{10}$
c	$8+4\sqrt{5}-2\sqrt{2}-\sqrt{10}$	**d**	$5+4\sqrt{5}+2\sqrt{2}-\sqrt{10}$
e	$8+\sqrt{5}-2\sqrt{2}-\sqrt{10}$	**f**	$12+2\sqrt{2}-\sqrt{3}$

3 Multiply the radical expressions and simplify the answer

$$(5-\sqrt{5})\cdot(\sqrt{5}-2)$$

a	$3\sqrt{5}-4$	**b**	$5\sqrt{2}-5+\sqrt{5}$
c	$5\sqrt{5}-1-2$	**d**	$7\sqrt{5}-15$
e	$3\sqrt{5}+5$	**f**	$3\sqrt{5}-11$

4 Multiply the radical expressions and simplify the answer

$$(\sqrt{13}-4)\cdot(\sqrt{3}+4)$$

a	$\sqrt{39}+4\sqrt{13}+4\sqrt{3}-1$	**b**	$\sqrt{39}+2\sqrt{13}-4\sqrt{3}-1$
c	$\sqrt{39}+\sqrt{13}-4\sqrt{3}-16$	**d**	$4\sqrt{39}+\sqrt{13}-4\sqrt{3}+16$
e	$4\sqrt{39}+4\sqrt{13}-4\sqrt{3}-16$	**f**	$\sqrt{39}+4\sqrt{13}-4\sqrt{3}-16$

5 Multiply the radical expressions and simplify the answer

$$(4+\sqrt{7})\cdot(\sqrt{7}-3)$$

a	$\sqrt{7}-5$	**b**	$2\sqrt{7}+5$
c	$3\sqrt{7}-5$	**d**	19
e	-5	**f**	$3\sqrt{7}-40$

6 Multiply the radical expressions and simplify the answer

$$(\sqrt{11}-3)\cdot(\sqrt{13}-3)$$

a	$10-3\sqrt{11}-3\sqrt{13}$	**b**	$14-3\sqrt{11}+3\sqrt{13}$
c	$\sqrt{143}-2\sqrt{11}-3\sqrt{13}+9$	**d**	$\sqrt{143}-3\sqrt{11}-3\sqrt{13}+1$
e	$\sqrt{143}-3\sqrt{11}-3\sqrt{13}+9$	**f**	$10+3\sqrt{11}-3\sqrt{13}$

7 Multiply the radical expressions and simplify the answer

$$(4+\sqrt{2})\cdot(\sqrt{5}-3)$$

a	$4\sqrt{5}-12+\sqrt{10}+\sqrt{2}$	**b**	$3\sqrt{5}-2-\sqrt{10}-3\sqrt{2}$
c	$16+\sqrt{10}-3\sqrt{2}$	**d**	$4\sqrt{5}-12+\sqrt{10}-3\sqrt{2}$
e	$4\sqrt{5}-11+3\sqrt{2}$	**f**	$4\sqrt{5}-1+4\sqrt{10}-3\sqrt{2}$