mobius

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

1 Multiply the radical expressions and simplify the answer

$$(5z\sqrt{z} + z^2\sqrt{2}) \cdot \sqrt{11z}$$

a	$5z^4\sqrt{11} + z^2\sqrt{22z}$	b	$5z^2\sqrt{3} + z^2\sqrt{22z}$
c	$5z^3\sqrt{11} + z^2\sqrt{22z}$	d	$5z^2\sqrt{11} + z^2\sqrt{22z}$
e	$5z^2\sqrt{11} + 5z^2\sqrt{22z}$		

2 Multiply the radical expressions and simplify the answer

$$\sqrt{5} \cdot (5d + d\sqrt{11})$$

a	$5d\sqrt{5} + d\sqrt{55}$	b	$5d^{-1}\sqrt{5} + d\sqrt{55}$
c	$5d\sqrt{5} + d^{-1}\sqrt{55}$		

3 Multiply the radical expressions and simplify the answer

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

a	$3m\sqrt{7m} + \sqrt{77m}$	b	$3m\sqrt{7m} + 4\sqrt{77m}$
c	$3m\sqrt{7m^{-1}} + \sqrt{77m}$	d	$3m\sqrt{7} + \sqrt{77m}$
e	$3m\sqrt{7m} + \sqrt{77}$		

4 Multiply the radical expressions and simplify the answer

$$(\sqrt{2} + 5\sqrt{m}) \cdot m\sqrt{2}$$

a	$2m + 5m\sqrt{2m}$	b	$2m^3 + 5m\sqrt{2m}$
c	$2m + 5m\sqrt{2m^{-1}}$	d	$6m + 5m\sqrt{2m}$
e	$2m + 5m^{-1}\sqrt{2m}$		

5 Multiply the radical expressions and simplify the answer

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

a	$4d^2\sqrt{13} + d\sqrt{39d}$	b	$4d\sqrt{13d} + d\sqrt{39d}$
c	$4d^2\sqrt{13} + d\sqrt{39d^{-1}}$	d	$4d^2\sqrt{13} + d\sqrt{d}$
e	$4d^2\sqrt{13} + 2d\sqrt{39d}$		

6 Multiply the radical expressions and simplify the answer

$$\sqrt{3m} \cdot (m\sqrt{3m} - 2m\sqrt{m})$$

a	$3m^2 - 2m^2\sqrt{3}$	b	$3m^4 - 2m^2\sqrt{3}$
c	$3m^2\sqrt{m} - 2m^2\sqrt{3}$	d	$3m^2 - 2m^3\sqrt{3}$

7 Multiply the radical expressions and simplify the answer

$$\sqrt{7c} \cdot (5 + \sqrt{5})$$

a	$5\sqrt{7c} + c\sqrt{35c}$	b	$5\sqrt{7c} + \sqrt{2c}$
c	$5\sqrt{7c} + \sqrt{35c}$	d	$5\sqrt{7c} + 4\sqrt{35c}$
e	$5\sqrt{7c} + \sqrt{35}$		