Distributive Property and FOIL with Radicals

Level 1 - Use the distributive property to expand and then simplify

Level 2 - Use the FOIL method to expand and then simplify

Level 3 - Expand and then simplify expressions containing variables

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Answers:

Level 1

a) $3 + 5\sqrt{3}$	**b)** $48 + 4\sqrt{3}$	**c)** $-6 + 3\sqrt{3}$
d) $4 + 2\sqrt{3}$	**e)** $5\sqrt{2} - \sqrt{15}$	**f)** $6\sqrt{3} + 6\sqrt{2}$
g) $6\sqrt{6} + 6\sqrt{30}$	**h)** $6 - 2\sqrt{15}$	**i)** $60 - 10\sqrt{6}$
j) $-18 + 6\sqrt{6}$	**k)** $6\sqrt{14} + 2\sqrt{7}$	**l)** $-9\sqrt{2}$
m) $-6\sqrt{10}$	**n)** $-8 + 2\sqrt{5}$	**o)** $-6\sqrt{2} - 24\sqrt{3}$
p) $5 - 25\sqrt{5}$	**q)** $200\sqrt{14} + 100\sqrt{70}$	**r)** -2

Level 2

a) $-9 + \sqrt{3}$	**b)** $13 + 8\sqrt{6}$
c) 1	**d)** $6 - 4\sqrt{2}$
e) 20	**f)** $3\sqrt{10} + 3\sqrt{6}$
g) $98 - 24\sqrt{10}$	**h)** $35 - 12\sqrt{6}$

Level 3

a) $1 - b$	**b)** $4n + \sqrt{2n} - 6$
c) $a - b$	**d)** $6x + 2x\sqrt{5}$