

Name:

Class/Set:

# Solving Quadratics - Formula, surd form

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1: Solve using the quadratic formula, giving your answer in simplified surd form:

a)  $v^2 + 10v + 2 = 0$

b)  $h^2 + 6h - 1 = 0$

c)  $x^2 + 2x - 2 = 0$

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d)  $f^2 - 7f - 4 = 0$

e)  $q^2 + 8q - 4 = 0$

f)  $y^2 - y - 5 = 0$

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2: Solve using the quadratic formula, giving your answer in simplified surd form:

a)  $-k^2 + 5k - 1 = 0$

b)  $w^2 - 4w - 1 = 0$

c)  $-j^2 - 10j + 5 = 0$

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d)  $s^2 - 6s + 1 = 0$

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e)  $-c^2 - 9c - 4 = 0$

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f)  $-2f^2 - 5f - 1 = 0$

# Answers: Solving Quadratics - Formula, surd form

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1: a)  $v = -5 \pm \sqrt{23}$

b)  $h = -3 \pm \sqrt{10}$

c)  $x = -1 \pm \sqrt{3}$

d)  $f = 3\frac{1}{2} \pm \frac{1}{2}\sqrt{65}$

e)  $q = -4 \pm 2\sqrt{5}$

f)  $y = \frac{1}{2} \pm \frac{1}{2}\sqrt{21}$

2: a)  $k = 2\frac{1}{2} \pm \frac{1}{2}\sqrt{21}$

b)  $w = 2 \pm \sqrt{5}$

c)  $j = -5 \pm \sqrt{30}$

d)  $s = 3 \pm 2\sqrt{2}$

e)  $c = -4\frac{1}{2} \pm \frac{1}{2}\sqrt{65}$

f)  $f = -1\frac{1}{4} \pm \frac{1}{4}\sqrt{17}$