Simultaneous Linear and Quadratic

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1: Solve the following simultaneous equations:

a) $u = v^2$
   $u = 6v - 8$

b) $n = h^2$
   $n = 7h - 12$

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c) $r = x^2$
   $r = x + 6$

d) $t = f^2$
   $t = 4f - 3$

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2: Solve the following simultaneous equations:

a) $e = q^2 - 2q - 12$
   $e = -4q + 3$

b) $a = y^2 + 3y - 7$
   $a = -y - 2$

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c) $b = k^2 + 6k + 16$
   $b = -k + 4$

d) $z = w^2 + w - 21$
   $z = 2w - 1$

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3: Solve the following simultaneous equations:

a) $j - 6p = -3$
   $j^2 + p^2 = 1$

b) $5s + m = 7$
   $s^2 + m^2 = 16$

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c) $c - 5g = -1$
   $c^2 + g^2 = 4$

d) $6e + u = 3$
   $e^2 + u^2 = 16$

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Answers: Simultaneous Linear and Quadratic

1: a) $v = 4$ and $u = 16$ b) $h = 4$ and $n = 16$ c) $x = 3$ and $r = 9$ d) $f = 3$ and $t = 9$
    $v = 2$ and $u = 4$ $h = 3$ and $n = 9$ $x = -2$ and $r = 4$ $f = 1$ and $t = 1$

2: a) $q = -5$ and $e = 23$ b) $y = -5$ and $a = 3$
    $q = 3$ and $e = -9$ $y = 1$ and $a = -3$

    c) $k = -4$ and $b = 8$ d) $w = -4$ and $z = -9$
    $k = -3$ and $b = 7$ $w = 5$ and $z = 9$

3: a) $j = -0.93916$ and $p = 0.34347$ b) $s = 0.60934$ and $m = 3.95332$
    $j = 0.777$ and $p = 0.6295$ $s = 2.08297$ and $m = -3.41485$

    c) $c = -1.99017$ and $g = -0.19803$ d) $e = -0.16609$ and $u = 3.99655$
    $c = 1.91325$ and $g = 0.58265$ $e = 1.13906$ and $u = -3.83439$