



Factor Polynomials (Order 4) - As Quadratic (With Hint), Coefficient 1

1
 $t^4 - 13t^2 + 36$ Factor this higher order polynomial

hint:

$n^2 - 13n + 36$	A	B
$n = t^2$	$(t^2 - 4)(t^2 - 9)$	$(t^2 + 4)(t^2 + 9)$

2
 $w^4 + 6w^2 + 8$ Factor this higher order polynomial

hint:

$r^2 + 6r + 8$	A	$(w^2 + 4)(w^2 + 2)$
$r = w^2$	B	$(2w^2 - 4)(w^2 + 2)$

3
 $p^4 - 14p^2 + 45$ Factor this higher order polynomial

hint:

$q^2 - 14q + 45$	A	$(p^2 - 5)(p^2 - 9)$
$q = p^2$	B	$(p^2 - 5)(4p^2 + 9)$

4
 $w^4 - 7w^2 + 10$ Factor this higher order polynomial

hint:

$n^2 - 7n + 10$	A	$(w^2 - 2)(w^2 - 5)$
$n = w^2$	B	$(w^2 + 2)(3w^2 - 5)$

5
 $t^4 - 4$ Factor this higher order polynomial

hint:

$r^2 - 4$	A	B
$r = t^2$	$(t^2 + 2)(t^2 - 2)$	$(t^2 + 2)(t^2 + 2)$

6
 $z^4 + 11z^2 + 18$ Factor this higher order polynomial

hint:

$p^2 + 11p + 18$	A	$(z^2 + 9)(7z^2 - 2)$
$p = z^2$	B	$(z^2 + 9)(z^2 + 2)$

7
 $x^4 + 11x^2 + 24$ Factor this higher order polynomial

hint:

$n^2 + 11n + 24$	A	$(x^2 + 8)(x^2 + 3)$
$n = x^2$	B	$(x^2 - 8)(5x^2 + 3)$

8
 $m^4 + 9m^2 + 20$ Factor this higher order polynomial

hint:

$t^2 + 9t + 20$	A	$(1m^2 - 4)(m^2 + 5)$
$t = m^2$	B	$(m^2 + 4)(m^2 + 5)$