# حل المعادلات التربيعية بالتحليل (2)

أحلل المعادلات : ( ) ( ) = ( )

1) $3x^2+11x+6$

$x^2+11x+18$

$(x+\frac{9}{3})(x+\frac{2}{3})$

$(x+3)(3x+2)$

2) $8x^2-30x+7$

$x^2-30x+56$

$(x-\frac{28}{8})(x-\frac{2}{8})$

$(x-\frac{7}{2})(x-\frac{1}{4})$

$(2x-7)(4x-1)$

3) $6x^2+15x-9$

$\div 3$

$2x^2+5x-3$

$x^2+5x-6$

$(x+\frac{5}{2})(x-\frac{1}{2})$

$(2x+5)(2x-1)$

4) $4x^2-4x-35$

$x^2-4x-140$

$(x-\frac{14}{4})(x+\frac{10}{4})$

$(x-\frac{7}{2})(x+\frac{5}{2})$

$(2x-7)(2x+6)$

أحل المعادلات التربيعية :-

7) $24x^2-19x+2=0$

$x^2-19x+48=0$

$(x-\frac{16}{24})(x-\frac{3}{24})$

$(x-\frac{2}{3})(x-\frac{1}{8})$

$(3x-2)(8x-1)$

$3x-2=0 \quad x=\frac{2}{3}$ | $8x-1=0 \quad 8x=1 \quad x=\frac{1}{8}$

8) $18t^2+9t+1=0$

$t^2+9t+18=0$

$(x+6)(x+3)$

$(\frac{x+6}{18})(\frac{x+3}{18})$

$(t+\frac{1}{3})(t+\frac{1}{6})$

$(3t+1)(6t+1)$

$3t+1=0 \quad t=\frac{-1}{3}$ | $6t+1=0 \quad t=\frac{-1}{6}$

9) $5x^2+8x+3=0$

$x^2+8x+150$

$(x+5)(x+3)$

$(x+1)(5x+3)$

$x=-1$ | $5x+3=0 \quad 5x=-3 \quad x=\frac{-3}{5}$

10) $5x^2-9x-2=0$

$x^2-9x-10=0$

$(x-\frac{10}{5})(x+\frac{1}{5})$

$(x-2)(x+\frac{1}{5})$

$(x-2)(5x+1)$

$x=2$ | $x=\frac{-1}{5}$

5) $(12x^2+36x+27)^3$

$4x^2+12x+9$

$x^2+12x+36$

$(x+\frac{6}{4})(x+\frac{6}{4})$

$(x+\frac{3}{2})(x+\frac{3}{2})$

$(2x+3)(2x+3)$

5) $8x(x+1)=16$

$8x^2+8x=16$

$(8x^2+8x-16)\div 4=0$

$(2x^2+2x-4)\div 2=0$

$x^2+x-2=0$

$(x+2)(x-1)$

$x=-2$ | $x=1$