

PRE-AP ALGEBRA 2

1) Solve the quadratic equations for x by factoring.

a) $x^2 - 15x + 44 = 0$

b) $x^2 + 10x - 39 = 0$

a) $x^2 - 15x + 44 = (x-4)(x-11) = 0$

$x-4=0, x=4 \leftarrow x-11=0, x=11 \leftarrow$

b) $x^2 + 10x - 39 = (x-3)(x+13) = 0$

$x-3=0, x=3 \leftarrow x+13=0, x=-13 \leftarrow$

3B.1 CLASSWORK

2) Solve the quadratic equations for x by factoring.

a) $6x^2 - 11x - 35 = 0$

b) $20x^2 + 7x - 3 = 0$

a) $ac = (6)(-35) = -210 = -2 \cdot 3 \cdot 5 \cdot 7 = tu$

$b = -11 = t+u, t = -21, u = 10 \rightarrow$

$6x^2 - 11x - 35 = 6x^2 - 21x + 10x - 35 =$

$= 3x(2x-7) + 5(2x-7) = (3x+5)(2x-7) = 0$

$3x+5=0, x = -\frac{5}{3} \leftarrow 2x-7=0, x = \frac{7}{2} \leftarrow$

b) $ac = 20(-3) = -60 = -2^2 \cdot 3 \cdot 5 = tu$

$7 = t+u, t = 12, u = -5$

$20x^2 + 7x - 3 = 20x^2 + 12x - 5x - 3 =$

$= 4x(5x+3) - 1(5x+3) = (4x-1)(5x+3) = 0$

$4x-1=0, x = \frac{1}{4} \leftarrow 5x+3=0, x = -\frac{3}{5} \leftarrow$