

Algebra 2: Homework 58

- Find the product of the roots of the quadratic equation $2x^2 + 5x = 17$.
- Write a quadratic equation that has a root of $5 - 3i$.
- If the equation $x^2 - 6x + k = 0$ has 4 as one root, find the other root and find the value of k .
- Find the discriminant of the quadratic equation $-3x^2 + 5x - 2 = 0$.
- Solve for x : $x^2 - 6x = -25$
- For each equation, state the number (1, 2, 3, or 4) which correctly describes the nature of the roots:
 - real, rational, and unequal
 - real, rational and equal
 - real, irrational, and unequal
 - imaginary
 - $x^2 + 9 = 2x^2 + x$
 - $x^2 - 4x = 4$
 - $x^2 + 3x = 5x - 10$
- For each equation, state the number (1, 2, 3, or 4) which correctly describes the graph:
 - It is tangent to the x -axis.
 - It intersects the x -axis at two points.
 - It lies entirely above the x -axis.
 - It lies entirely below the x -axis.
 - $y = -x^2 + 3x - 7$
 - $y = x^2 - 10x + 2$
 - $y = x^2 - 14x + 49$
- The roots of $x^2 + 2x + k = 0$ are equal when k is
 - 1
 - 2
 - 3
 - 4
- Find the largest integral value of k for which the roots of $2x^2 + 7x + k = 0$ are real.
- Solve for x : $x - 8 = \frac{-20}{x}$
- If one root of the equation $2x^2 + kx - 5 = 0$ is $\frac{1}{2}$, find the other root and find k .