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| Find all real solutions. | | | | |
| 1. 3x² + 25x = -28 | 1. 27x³ = 64 | | | 1. x³ - 3x² = 4x – 12 |
| 1. x³y – 4xy = 0 | 1. (a² + 1)² - 12(a² + 1) = -20 | | |  |
|  | | | | |
| 1. x + 5 = 14 – ½x |  | | | 1. x² - x – 12 = 0 |
| 1. - 3x² + 2 = 0 | 1. 3|x - 4| = 10 | | |  |
| Word Problems. | | | | |
| 1. Find three consecutive integers whose sum is 360. | | 1. If Ben invests $3000 at 4% interest per year, how much additional money must he invest at 5.5% annual interest to ensure that the interest he receives each year is 4.5% of the total amount invested? | | |
| 1. A rectangular parcel of land is 70 ft longer than it is wide. Each diagonal between opposite corners is 130 ft. What are the dimensions of the parcel? | | 1. A large plywood box has a volume of 180 ft³. Its length is 9 ft greater than its height, and its width is 4 ft less than its height. What is the height of the box?   . | | |
| Solve each inequality. Write the answer using interval notation, and sketch the solution on the real number line. | | | | |
| 1. -4 < 5 – 3x ≤ 17 |  | | | 1. |x - 4|< 3 |
|  |  | | |  |
| Describe and sketch the regions given by each set. | | | | |
| y | | | y | |
| 23. Plot the points P(0, 3), Q(3, 0), and R(6, 3) in the coordinate plane.  a) Where must the point S be located so that PQRS is a square?  b) Find the area of PQRS | | | 1. Let P(-3, 1) and Q(5, 6) be two points in the coordinate plane.   Plot P and Q in the coordinate plane.  Find the distance between P and Q.  Find the midpoint of the segment PQ.  Find the slope of the line that contains P and Q.  Find the perpendicular bisector of the line that contains P and Q.  Find an equation for the circle for which the segment PQ is the diameter. | |
| 1. Find the x and y intercepts of the graph of | a ) y = x² - 4. | | | b) |
| Find the center and radius of each circle. | | | | |
| 1. x² + y² = 25. | 1. (x – 2)² + (y + 1)² = 9 | | | 1. x² + 6x + y² - 2y + 6 = 0 |
| Find the equation of the circle. | | | | |
| 1. Centered at (-2,2); passes through (0,2) | | | 1. Centered at (-1,1); passes through (2,0) | |
| Find an equation for the line with the given property. | | | | |
| 1. It passes through the point (3, -6) and is parallel to the line 3x + y – 10 = 0. | | | 1. It has x-intercept 6 and y-intercept 4. | |