

Name: _____
Date: _____
Class: _____

Algebra
Review
Graded Homework 23

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.
NO WORK = ZERO CREDIT

1) The zeros of the function $f(x) = (x + 2)^2 - 25$ are

- (1) -2 and 5 (3) -5 and 2
(2) -3 and 7 (4) -7 and 3

2) [3]

In the equation $x^2 + 10x + 24 = (x + a)(x + b)$, b is an integer. Find algebraically *all* possible values of b .

3) [3]

Rhonda deposited \$3000 in an account in the Merrick National Bank, earning 4.2% interest, compounded annually. She made no deposits or withdrawals. Write an equation that can be used to find B , her account balance after t years.

(compounded annually means she gets interest at the end of each year).

4) [3] In #3, how much would the balance increase during the 7th year?

5) [3]

Guy and Jim work at a furniture store. Guy is paid \$185 per week plus 3% of his total sales in dollars, x , which can be represented by $g(x) = 185 + 0.03x$. Jim is paid \$275 per week plus 2.5% of his total sales in dollars, x , which can be represented by $f(x) = 275 + 0.025x$. Determine the value of x , in dollars, that will make their weekly pay the same.

6) [3]

Express the product of $2x^2 + 7x - 10$ and $x + 5$ in standard form.

7) [3]

The formula for the area of a trapezoid is $A = \frac{1}{2}h(b_1 + b_2)$. Express b_1 in terms of A , h , and b_2 .

8) [4]

A school is building a rectangular soccer field that has an area of 6000 square yards. The soccer field must be 40 yards longer than its width. Determine algebraically the dimensions of the soccer field, in yards.