Algebra 2   Bellwork   Tuesday, October 20, 2015

1. Together you and I have \$227. You have one less than twice as much as I do. Write and solve a system of equations to find out how much money each of us has.
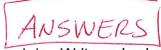
System of equations:

$ I have:

$ you have:

2. Solve each quadratic equation by factoring.
- Factor each completely.
- Find the zeros of each factor.

a) $6Q^2 + Q - 12 = 0$

b) $6m^3 - 48m^2 - 288m = 0$

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1. Together you and I have \$227. You have one less than twice as much as I do. Write and solve a system of equations to find out how much money each of us has.

System of equations:

$x = \$$ I have
$y = \$$ you have

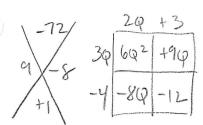$x + y = 227$
$y = 2x - 1$

$x + 2x - 1 = 227$
$3x - 1 = 227$
$3x = 228$
$x = 76$

$ I have: $\$76$

$ you have: $\$151$

$y = 2(76) - 1$

2. Solve each quadratic equation by factoring.
- Factor each completely.
- Find the zeros of each factor.

a) $6Q^2 + Q - 12 = 0$ $(2Q + 3)(3Q - 4) = 0$

$Q = -\frac{3}{2}, \frac{4}{3}$

$2Q + 3$

$3Q$	$6Q^2$	$+9Q$
-4	$-8Q$	-12

-72 / 9 / +1 / -8

b) $6m^3 - 48m^2 - 288m = 0$

$6m(m^2 - 8m - 48) = 0$

$6m(m - 12)(m + 4) = 0$

$m = 0, 12, -4$

-48 / -12 / 4 / -8

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