ANSWERS: more algebra problems

Question A: Call the two numbers x and y, then

$$X + y = 212 \quad \text{and}$$

$$\underline{X - y = 112}$$

$$2x \quad = 324$$

Therefore: x = 162 and y = 50

If you pick ANY number and zero, then the two numbers have a sum and difference that are the same.

Question B: Let N = years in the future. Jack's age is 12 + N and Bill's age is 30 + N. Twice Jack's age is the same as saying that Bill is twice as old. Therefore, 2(12 + N) = 30 + N. 24 + 2N = 30 + N. N = 6 and Jack is 18 and Bill is 36.

Question C: $x^2 = 3x - 2$ and $x^2 - 3x + 2 = 0$; factoring yields:

X – 1)(x – 2) = 0 and if x – 1 = 0, then x =1 and if x – 2 = 0, then x = 2