3-81. See below:

a.
$$-20xy - 32y^2$$

b.
$$-36x + 90xy$$

$$c. x^4 + 3x^3 + 3x^2 - 6x - 10$$

3-82. Yes, for even numbers. On a number line, if you start at any multiple of two and add a multiple of two (an even number), you will always be stepping up the number line in multiples of two; you will always land on an even number. No for odd numbers. For example, 3 + 5 = 8; the sum of two odd numbers is not always

3-83.
$$(x-5)(x+3) = x^2 - 2x - 15$$

3-84. See below:

a.
$$x = 8$$
 or $x = -2$

b.
$$x = \pm 7$$

c.
$$x = 1$$
 or $x = -3$

d. no solution

3-85. Find solutions in the diamonds below:









3-86. See below: