

**Answers to Chapter 6 Sample Exam  
Math 90, Elementary Algebra**

1.  $(a+10)(a-4)$
2.  $(m-3n)(m+3n)$
3.  $(a+2b)(a+10b)$
4.  $(2z+3y)(z-2)$
5.  $(3y-2)^2$  or  $(3y-2)(3y-2)$
6. *prime*
7.  $2xy(8x-15)$
8.  $2(3a-1)(a+2)$
9. *prime*
10.  $(2p-3)(p+5)$
11.  $x=5$  or  $x=6$
12.  $x=12$  or  $x=-12$
13.  $x=0$  or  $x=7$
14.  $x=0$  or  $x=8$  or  $x=-3$

15. Using the Pythagorean Thrm:

$$x^2 + (x-2)^2 = (x+2)^2$$

$$x^2 + x^2 - 4x + 4 = x^2 + 4x + 4$$

$$x^2 - 8x = 0$$

$$x(x-8) = 0$$

$$x = 0 \text{ (doesn't make sense) or } x = 8$$

$$x = 8 \text{ cm}$$

The longer leg is 8cm long.

