Factoring Practice Homework:

Part 1: Solve.

1. $(x + 3)(x - 2) = 0$

4. $x^2 + x - 42 = 0$

7. $2x^2 - 12x + 10 = 0$

2. $(m - 5)(m + 7) = 0$
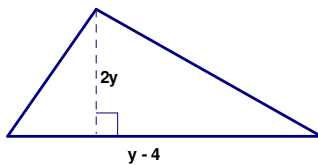
5. $a^2 - 3a = 18$

8. $5x^2 + 25x = -30$

3. $x^2 + 9x + 14 = 0$

6. $y^2 - 10y + 16 = 0$

Part 2: Apply Quadratics to Geometry!

9. A rectangle has sides x and (x – 3). Find the lengths of the sides of the rectangle if the area is 18 cm^2.

10. The triangle below has an area of 21 ft^2. Find the length of the height of the triangle. Give the reason for writing your first equation.

2y

y - 4

11. Use the diagram below to find PQ. Give the reason for writing your first equation and a reason for your final answer.

R

$m^2 + 3m$ $10m - 6$

P   Q
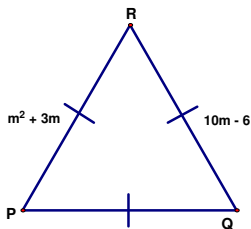
12. Find the perimeter of rectangle MATH if the area is $(5x + 7)$in^2. Give the reason for writing your first equation.

M   H

(x - 1)

A   (x + 8)   T
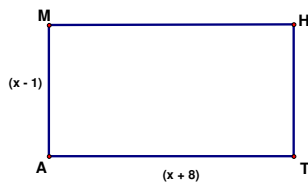
13. Find KL in the diagram below. Give the reason for writing your first equation.

J

K

$x^2 + 5x$

L

8x + 40   M