

# Algebra 201-007-50 03

## Quiz 8

October 31, 2008

Name: solution  
Student ID: \_\_\_\_\_

1. (3 marks). Solve:

$$x^2 + 6x - 40 = 0$$

$$(x+10)(x-4) = 0$$

$$\begin{array}{l} \swarrow \\ x+10=0 \end{array} \quad \begin{array}{l} \searrow \\ x-4=0 \end{array}$$

$$x = -10 \quad x = 4$$

$$\therefore x = -10, 4$$

2. (3 marks). Solve:

$$x(x+4) = 4(x+16)$$

$$x^2 + 4x = 4x + 64$$

$$x^2 + 4x - 4x - 64 = 0$$

$$x^2 - 64 = 0$$

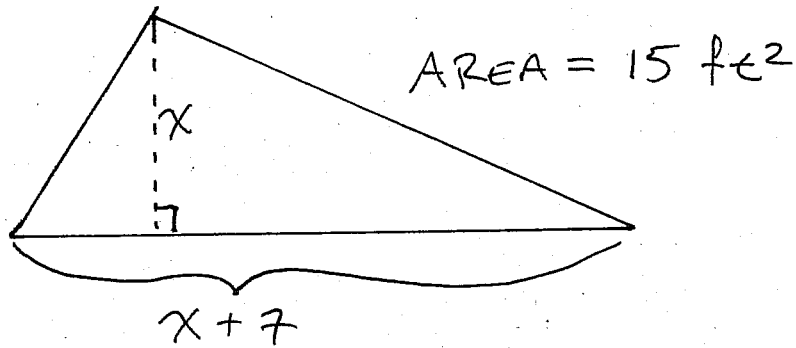
$$(x+8)(x-8) = 0$$

$$\begin{array}{l} \swarrow \\ x+8=0 \end{array} \quad \begin{array}{l} \searrow \\ x-8=0 \end{array}$$

$$x = -8 \quad x = 8$$

$$\therefore x = -8, 8$$

3. (4 marks). Find  $x$ :



$$15 = \frac{x(x+7)}{2}$$

$$30 = x(x+7)$$

$$30 = x^2 + 7x$$

$$0 = x^2 + 7x - 30$$

$$0 = (x+10)(x-3)$$

↙

$$x+10=0$$

$$x = -10$$

CAN'T HAVE

NEGATIVE  
LENGTH

↘

$$x-3=0$$

$$x=3$$