

BRONX COMMUNITY COLLEGE
of the City University of New York

DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE

MATH 03
Nikos Apostolakis

Quiz 5
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Print Name: _____

KEY

1. Solve the following equation:

$$2x - 5 = 4x - 15$$

$$2x - 4x = -15 + 5$$

$$-2x = -10$$

$$x = 5$$

2. Solve the following equation:

$$2(3x - 5) = -3(x + 2) - 4$$

$$6x - 10 = -3x + 6 - 4$$

$$6x + 3x = -10 + 10$$

$$9x = 0$$

$$x = \frac{0}{9} \iff x = 0$$

3. Solve the following equation:

$$2(x - 5) + 4 = 7(x + 1) - 5x$$

$$2x - 10 + 4 = 7x + 7 - 5x$$

$$2x - 6 = 2x + 7$$

$$\boxed{0 = 13} \implies \text{Contradiction}$$

No solutions

4. Solve:

$$\frac{3x-2}{4} = 2x-1$$

$$3x-2 = 8x-4$$

$$4-2 = 8x-3x$$

$$2 = 5x$$

$$\boxed{\frac{2}{5} = x}$$

5. Find a , if the following equation is a tautology:

$$3(2x-1) = 6x+a$$

$$6x-3 = 6x+a$$

So ~~$x=3$ has to~~ a has to be -3

6. Find b , if $x = 4$ is a solution of the equation:

$$3x-5 = b-x$$

$$3 \cdot 4 - 5 = b - 4$$

$$12 - 5 = b - 4$$

$$7 = b - 4$$

$$\boxed{11 = b}$$