

Quiz #1

Problem 1: In problems 1-7, solve all the equations for x . Do not forget to check your results.

$$3 - 8(x - 5) = 27$$

Problem 2:

$$\frac{2x}{x^2 - 4} = \frac{1}{x + 2} - \frac{1}{x - 2}$$

Problem 3:

$$9x^2 - 9x - 10 = 0$$

Problem 4:

$$\sqrt{9 - x} = x - 7$$

Problem 5:

$$(x^2 + 1)^2 - 4(x^2 + 1) + 4 = 0$$

Problem 6:

$$x^4 - 8x^2 + 12 = 0$$

Problem 7:

$$|-2|x + |x|| = 6$$

Problem 8: Check if the following equation has a solution and if it does, find it.

$$3x^2 - 5x + 3 = 0$$

Problem 9: In problems 9-12 solve all inequalities on x and express your results as intervals.

$$2 \geq 3 - \frac{x + 5}{2} \geq 1$$

Problem 10:

$$|3 - x| - 5 > 0$$

Problem 11:

$$|2x + 5| - 7 \leq 0$$

Problem 12: Plot points A=(-4,-3) and B=(6,2) on coordinate axes, find the distance and the midpoint.

Problem 13: Consider the following equation:

$$y^2 - x - 4 = 0.$$

List intercepts and test for symmetry.

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