

Take Home Quiz # 3

Justify and show the means by which you arrive at your answers using equations, pictures, calculations, geometry, algebra steps, and/or technology. You will not receive full credit if your answer is not supported by work that is legible and organized.

• Place a box around your final answer. It won't be graded if you do not do this!

 Make your answers and their presentation in a professional and easily understandable format ... make this your clearest and best work! Points will be deducted for disorganized, sloppy work.

9.1 (And Factoring Review)

1. Solve using the "ac" method: $2x^2 - 3x - 2 = 0$ a = 2 - 2 = -4 $(2x^2 - 4x) + (1x - 2) = 0$ x - 2 = 0 $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$ $(2x^2 - 4x) + (1(x - 2)) = 0$

Solve using the principle of square roots. Write your answer in simplest radical form.

$$2.\sqrt{(2x+3)^{2}} = \sqrt{20}$$

$$2x+3 = \pm \sqrt{20}$$

$$2x+3 = \pm 2\sqrt{5}$$

$$2x = -3 \pm 2\sqrt{5}$$

1X=±3L

3.
$$6x^2 + 60 = 6$$
 $-60 - 60$

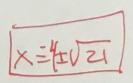
$$6x^2 = -54$$

$$\sqrt{x^2 = \sqrt{-9}}$$

9.2

Solve the quadratic equation by completing the square:

4.
$$x^{2}+8x-5=0$$
 $X^{2}+8x+16=5+16$
 $(X+4)^{2}=21$
 $X+4=\sqrt{2}$
 $X+4=\sqrt{2}$
 $X+4=\sqrt{2}$





5.
$$2x^{2}+3x-4=0$$
 $\left(\frac{1}{23}\right)^{2}=\left(\frac{3}{4}\right)^{2}=\frac{9}{16}$

$$2x^{2}+3x = \frac{9}{2}$$

$$x^{2}+\frac{3}{2}x+\frac{9}{4}=\frac{9}{2}+\frac{9}{16}$$

$$\sqrt{x^{2}+\frac{3}{2}} + \frac{9}{4} = \frac{9}{2}+\frac{9}{16}$$

9.3

Solve using the quadratic formula:

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$$6. 5x^{2} + 6x - 8 = 0 \qquad X = \frac{-6 \pm \sqrt{6^{2} - 4(5)(8)}}{2(5)}$$

$$= \frac{-6 \pm \sqrt{196}}{60} = \frac{-6 \pm \sqrt{9}}{105} = \frac$$

7.
$$2x(x+4)=3x-3$$

 $2x^2+8x=3x-3$
 $2x^2+5x+3=0$

$$X = \frac{-5 \pm \sqrt{5^2 - 4(2)(3)}}{2(2)}$$

$$X = \frac{-5 \pm \sqrt{5^2 - 4(2)(3)}}{4}$$

$$8\left(\frac{x^{2}}{3} \cdot x \cdot \frac{1}{6} = 0\right) 6$$

$$2x^{2} - 6x - 1 = 0$$

$$X = \frac{6 \pm \sqrt{6^{2} - 4(2)6}}{2(2)}$$

$$X = \frac{6 \pm \sqrt{44}}{4}$$

$$X = \frac{6 \pm \sqrt{44}}{4} = \frac{3 \pm \sqrt{11}}{2}$$

$$X = \frac{6 \pm \sqrt{41}}{4} = \frac{3 \pm \sqrt{11}}{2}$$