

Name: key Hour: \_\_\_\_\_

QUIZ 3A REVIEW!!!!

Solve using the method of your choice. Show all of your work. ☺

1.  $3x^2 - 24x = 0$

$3x(x-8) = 0$

$\frac{3x}{3} = \frac{0}{3} \quad x - \frac{8}{+8} = \frac{0}{+8}$

$x = 0 \quad x = 8$

2.  $10x^2 = 8x$

$10x^2 - 8x = 0$

$2x(5x-4) = 0$

$2x = 0 \quad 5x - 4 = 0$

$x = 0, \frac{4}{5}$

3.  $5x^2 = 35x$

$5x^2 - 35x = 0$

$5x(x-7) = 0$

$5x = 0 \quad x - 7 = 0$

$x = 0, 7$

4.  $x^2 - x - 12 = 0$

$(x-4)(x+3) = 0$

$x - 4 = 0 \quad x + 3 = 0$

$x = 4, -3$

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

$x^2 + 8x - 20 = 0$

$(x+10)(x-2) = 0$

$x + 10 = 0 \quad x - 2 = 0$

$x = -10, 2$

6.  $6x - 9 = x^2 - 6x + 9$

$x^2 - 6x + 9 = 0$

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

$x - 3 = 0$

$x = 3$

7.  $2x^2 + 9x = 35$

$2x^2 + 9x - 35 = 0$

$(2x^2 + 14x) - (5x - 35) = 0$

$2x(x+7) - 5(x+7) = 0$

$(2x-5)(x+7) = 0$

$2x - 5 = 0 \quad x + 7 = 0$

$x = \frac{5}{2}, -7$

8.  $3x^2 - 2x = 8$

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

$(3x^2 - 6x) + (4x - 8) = 0$

$3x(x-2) + 4(x-2) = 0$

$(x-2)(3x+4) = 0$

$x - 2 = 0 \quad 3x + 4 = 0$

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

9.  $8x^2 - 6x + 1 = 0$

$(8x^2 - 4x) - (2x - 1) = 0$

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

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

$4x - 1 = 0 \quad 2x - 1 = 0$

$x = \frac{1}{4}, \frac{1}{2}$

10.  $24x^2 = 72$

$\frac{24x^2}{24} = \frac{72}{24}$

$\sqrt{x^2} = \sqrt{3}$

$x = \pm\sqrt{3}$

11.  $2x^2 = 32$

$\frac{2x^2}{2} = \frac{32}{2}$

$\sqrt{x^2} = \sqrt{16}$

$x = \pm 4$

12.  $3x^2 - 192 = 0$

$\frac{3x^2}{3} = \frac{192}{3}$

$\sqrt{x^2} = \sqrt{64}$

$x = \pm 8$

13.  $x^2 - 8x + 5 = 0$

$a=1 \quad b=-8 \quad c=5$

$x = \frac{8 \pm \sqrt{(-8)^2 - 4(1)(5)}}{2(1)}$

$x = \frac{8 \pm \sqrt{44}}{2} = \frac{8 \pm 2\sqrt{11}}{2}$

$x = 4 \pm \sqrt{11}$

14.  $3x^2 - 2x - 6 = 0$

$x = \frac{2 \pm \sqrt{(-2)^2 - 4(3)(-6)}}{2(3)}$

$x = \frac{2 \pm \sqrt{76}}{6}$

$x = \frac{2 \pm 2\sqrt{19}}{6} = \frac{1 \pm \sqrt{19}}{3}$

15.  $2x^2 + 3x = 6$

$a=2 \quad b=3 \quad c=-6$

$x = \frac{-3 \pm \sqrt{3^2 - 4(2)(-6)}}{2(2)}$

$x = \frac{-3 \pm \sqrt{54}}{4}$

$x = \frac{-3 \pm 3\sqrt{6}}{4}$

$\sqrt{54} = 3\sqrt{6}$