Warmup:

$\frac{-2}{2} = -1$

$(-1)^2 = 1$

1) $10x^2 - 20x - 32 = -2$

$+32 \quad +32$

$10x^2 - 20x = 30$

$\frac{10(x^2 - 2x)}{10} = \frac{30}{10}$

$x^2 - 2x + \underline{1} = 3 + \underline{1}$

$\sqrt{(x-1)^2} = \sqrt{4}$

$x - 1 = \pm 2$

$+1 \quad +1$

$x = 1 \pm 2$

$x = 3$

$x = -1$

$\frac{4}{2} = 2$

$(2)^2 = 4$

2) $4r^2 + 16r + 92 = 0$

$-92 \quad -92$

$4r^2 + 16r = -92$

$\frac{4(r^2 + 4r)}{4} = \frac{-92}{4}$

$r^2 + 4r + \underline{4} = -23 + \underline{4}$

$\sqrt{(x+2)^2} = \sqrt{-19}$

$x + 2 = \pm i\sqrt{19}$

$-2 \quad -2$

$x = -2 \pm i\sqrt{19}$

1) $10k^2 + 20k - 30 = 0$

$10k^2 + 20k = 30$

$10(k^2 + 2k \quad) = 30$

$k^2 + 2k + \_\_ = 3 + \_\_$

$(k+1)^2 = 4$

$k+1 = \pm 2$

$k = -1 \pm 2$

$k = 1$

$k = -3$

2) $3x^2 + 6x - 72 = 0$

$3x^2 + 6x = 72$

$3(x^2 + 2x \quad) = 72$

$x^2 + 2x + \_\_ = 24 + \_\_$

$(x+1)^2 = 25$

$x+1 = \pm 5$

$x = -1 \pm 5$

$x = 4$

$x = -6$

3) $5p^2 + 10p - 78 = -3$

$5p^2 + 10p = 75$

$5(p^2 + 2p \quad) = 75$

$p^2 + 2p + \_\_ = 15 + \_\_$

$(p+1)^2 = 16$

$p+1 = \pm 4$

$p = -1 \pm 4$

$p = 3$

$p = -5$

4) $5k^2 + 10k - 10 = 5$

$5k^2 + 10k = 15$

$5(k^2 + 2k \quad) = 15$

$k^2 + 2k + \_\_ = 3 + \_\_$

$(k+1)^2 = 4$

$k+1 = \pm 2$

$k = -1 \pm 2$

$k = 1$

$k = -3$

5) $9x^2 + 18x - 55 = 0$

$9x^2 + 18x = 54$

$9(x^2 + 2x + \_\_) = 54$

$(x^2 + 2x + \_\_) = 6 + \_\_$

$(x+1)^2 = 7$

$x + 1 = \pm\sqrt{7}$

$x = -1 \pm \sqrt{7}$

6) $7n^2 + 14n - 82 = 0$

$7n^2 + 14n = 84$

$7(n^2 + 2n\ \ ) = 84$

$n^2 + 2n + \_\_ = 12 + \_\_$

$(n+1)^2 = 13$

$n + 1 = \pm\sqrt{13}$

$n = -1 \pm \sqrt{13}$

7) $7k^2 - 14k + 35 = 5$

$7k^2 - 14k = -35$

$7(k^2 - 2k\ \ ) = -35$

$k^2 - 2k + \_\_ = -5 + \_\_$

$(k-1)^2 = -4$

$k - 1 = \pm 2i$

$k = 1 \pm 2i$

8) $6n^2 + 12n + 84 = -8$

$6n^2 + 12n = -90$

$6(n^2 + 2n\ \ ) = -90$

$n^2 + 2n + \_\_ = -15 + \_\_$

$(n+1)^2 = -14$

$n + 1 = \pm i\sqrt{14}$

$n = -1 \pm i\sqrt{14}$

Unit 1 Test 2 Review