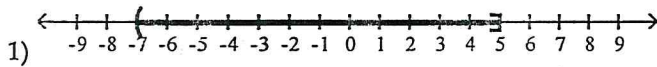Trig/Pre-Calculus Final Exam Review 2

Do all work on separate **sheet** of paper.

Use an inequality to describe the interval of real numbers.

1)

-9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9

2) $(-4, 5]$

Use words to describe the interval of real numbers.

3) $-4 \leq x < 8$

Solve the problem with technology. Sketch and label. *Respond w/ a sentence, including units*

✳ 4) A projectile is thrown upward so that its distance above the ground after t seconds is $h = -15t^2 + 390t$. When is the projectile more than 800 feet above ground?

Solve by completing the square.

5) $x^2 = 9 - 4x$

6) $x^2 - 12x + 11 = 0$

Solve the equation by factoring.

7) $24x^2 + 42x + 15 = 0$

Solve the equation graphically by finding its zeros. *or intersections*

✳ 8) $|x - 1| = 15x + 4$

✳ 9) $2x^2 + 11x + 1 = 0$

Write the sum or difference in the standard form a + bi.

10) $(3 + 8i) - (-2 + i)$

11) $\left(i^2 + 1\right) - \left(8 + i^3\right)$

Write the product in standard form.

12) $5i(4 - 6i)$

13) $(-6 - 4i)(-6 + 4i)$

Write the expression in standard form.

14) $\dfrac{i}{8 + i}$

15) $\dfrac{8 + 2i}{4 - 6i}$

✳ **Need a graphing calculator!**

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