

Bell Work Tuesday 11/14

SAT No Calculator

- For what **real** value of x is the equation below true?

$$x^3 - 5x^2 + 2x - 10 = 0$$

zeros
x-int.

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

$$(x-5)(x^2+2)$$

$$x-5=0$$

$$x=5$$

$$x^2+2=0$$

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

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

2nd method:

$$x^3 - 5x^2 + 2x - 10 = 0$$

$$(5)^3 - 5(5)^2 + 2(5) - 10 = 0$$

$$125 - 125 + 10 - 10 = 0$$

$$0 = 0 \checkmark$$

$$2x - 10 = 0$$

$$2x = 10$$

$$x = 5$$