

Week of 4.3

ALL necessary work must be shown to receive credit.

Warm up AFM:

Monday: A combination lock will open when the choice of three numbers, 1 – 50 inclusive, is selected correctly. How many combinations are possible?

Tuesday: Find the 30th term in the sequence: –511, –518, –525, ...

Wednesday: What are the transformations from the parent function?

$$f(x) = \left| -\frac{2}{3}x + 10 \right| + 1$$

Thursday: Evaluate $f(4) + f(-7)$ using the piecewise function:

$$f(x) = \begin{cases} 3x^2 - 5, & \text{if } x < 2 \\ 6 - 2x, & \text{if } x \geq 2 \end{cases}$$

Friday: The length of time it takes to groom a dog at Shaggy's Pet Shoppe is normally distributed with a mean of 45 minutes and standard deviation of 10 minutes. In a sample of 400 dogs, how many do we expect to take less than 25 minutes to groom?