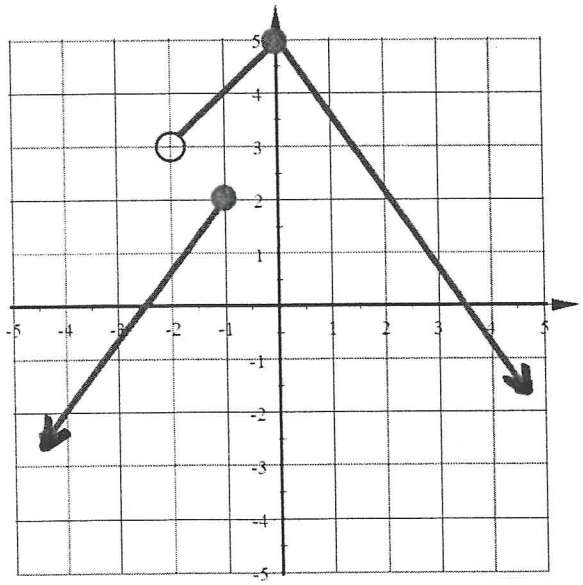
Algebra 2 Bellwork Thursday, September 25, 2014

Trucks have to stop at weigh stations along the freeways to make sure that they aren't overloaded and causing
excessive damage to the roadway or being dangerous to drive at highway speeds. Below is some data collected
at one of these weigh stations.

# of crates on board	Total Weight of Truck (lbs)
4	10,108
11	14,502
18	16,870
7	12,931
23	20,180

1. Find the linear regression line. Round to the nearest hundredth.
2. Explain what real quantities the y-intercept and the slope represent.
3. Predict the total weight of a truck that carries 8 crates.
4. Predict the number of crates carried by a truck with a total weight of 25,000 pounds.

5. Use the graph shown.
a. Is the relation a function?
b. State the Domain and Range of the relation.



6. Solve $|2x - 3| > 40$

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(1.) $y = 482.97x + 8832.77$

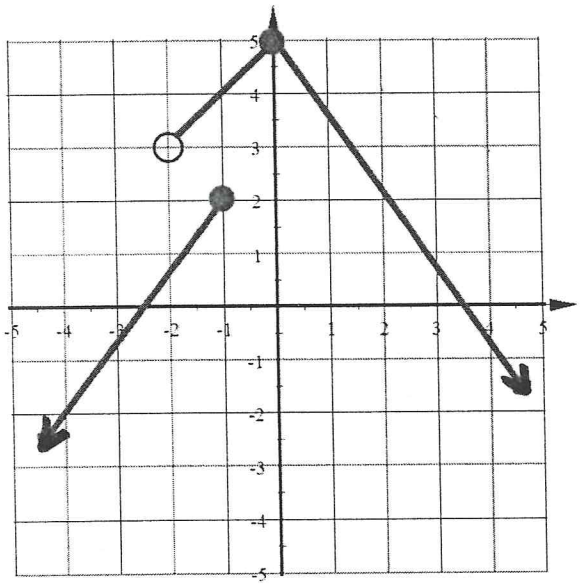
(2.) y-int = weight of empty truck
slope = weight of each crate

(3.) 12,696.53 lbs

(4.) 33.47 → 33 to 34

$25{,}000 = 482.97x + 8832.77$

5. Use the graph shown.
a. Is the relation a function?
b. State the Domain and Range of the relation.



a) NOT A FUNCTION

b) D: R
R: $y \leq 5$

6. Solve $|2x - 3| > 40$

$2x - 3 < -40$ or $2x - 3 > 40$

$2x < -37$ or $2x > 43$

$x < -18.5$ or $x > 21.5$