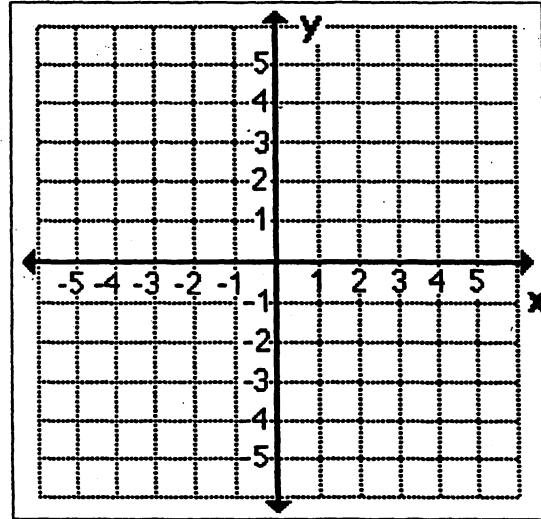Name: _____

(This shows my own thinking.)

★ 1. Is 1,000,000 minutes closer to 1 year, 2 years, or 3 years?

Answer : _____ years

★★★★ 2. Plot these points on the grid and connect them *in order*. You would get a familiar picture, except one of the points is a little off. Which point is wrong, and what should it be? (The picture should be symmetrical about the *y*-axis.)

(-3, 0) › (-2, -2) › (-2, -4) ›
(0, -2) › (2, -4) › (1, -1) ›
(3, 0) › (1, 0) › (0, 3) ›
(-1, 0) › (-3, 0)

Answer: The point _____ is incorrect. It should be the point _____.

★★★ 3. Chad, Missy, Luke and Mary measured their heights. Their heights, not necessarily in order, were 5'3", 5'7", 5'11" , and 5'9". Use the following clues to determine who was 5'9". Missy was taller than Mary, but not the tallest. Luke was taller than Missy, but not as tall as Chad.

Answer : _____ is 5'9"

★ 4. What geometric term describes a sunburned man? _____

★★★ 5. The highest "stunt dives" ever recorded into an air bag are 360 feet for the male record height, and 180 feet for the female height record. Use $v = 5\sqrt{d}$ to find out approximately how fast each of these divers was traveling when they hit the air bag. (*d* is distance of the fall in feet, and *v* is velocity in miles per hour)

Answer: The male was going _____ mph; the female was going _____ mph

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★★★ 6. Jessica wants to add a liquid vitamin to her two dogs' food. The veterinarian told her to add 3 mL per 6 pounds of the dog's body weight. How much will she need if Koko weighs 28 lbs.? How much will she need for Big Dog, who weighs 110 lbs.?
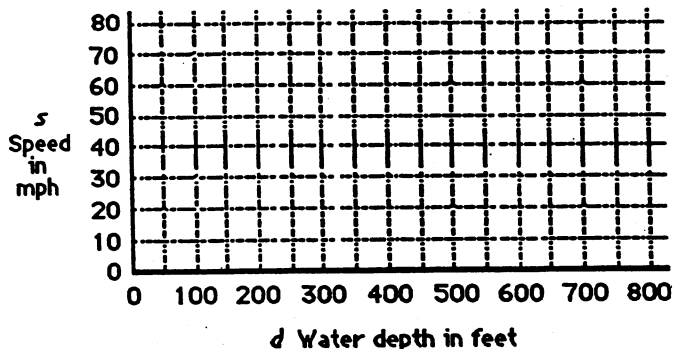
Answer: Koko: _____ mL

Big Dog: _____ mL

★★★★ 7. Mr. Bonti is replacing the square tiles in his bathroom. Each new tile is 3 inches longer and 3 inches wider than an old tile. Each new tile covers 39 square inches more than an old tile.

a. How big were the old square tiles?
b. If the area of the room is 5120 square inches, how many new tiles will he need?

Answer: a. ___ in. by ___ in.   b. _____ tiles

★★ 8. Tidal waves can travel very fast. Their speed is related to the depth of the water by this function: $s = 2\sqrt{d}$, where speed (s) is in mph and the water depth (d) is in feet.

a. Make and graph ordered pairs (d, s) for each of the multiples of 100 shown on the horizontal axis of the graph.

b. Connect the points with a curve.

s
Speed in mph

80
70
60
50
40
30
20
10
0

0 100 200 300 400 500 600 700 800

d Water depth in feet

★ 9. What is the probability of drawing a card from those pictured where the letter is the first letter of a day of the week?

| N | O | P | R | S | T |

Answer: _____