

Sum up the News – January 18th, 2016

Vocabulary

1. All lines that are perpendicular to the x-axis have a slope that is ____.
 - A. 0
 - B. 1
 - C. 90
 - D. undefined

2. A region on the coordinate plane is bounded by the lines $x = 0$, $y = 0$, $y = -\frac{1}{2}x + 10$. What is the area of the bounded region?
 - A. 25 square units
 - B. 50 square units
 - C. 100 square units
 - D. 200 square units

3. Triangles FGH and JGH share point G, which is on line segment FJ. If GH is perpendicular to FJ, which additional statement would confirm that the triangles are congruent via the Angle-Side-Angle postulate?
 - A. GH bisects FJ
 - B. GH bisects $\angle FHJ$
 - C. $\angle GFH \cong \angle GJH$
 - D. $\angle HFG \cong \angle HJG$

Based on the article “Sinkhole adds to Bertha’s woes, but drilling to resume” on page A1 of the Thursday, January 14th, Seattle Times.

4. In response to Bertha’s recent troubles, Seattle Tunnel Partners will measure the soil that the drill is removing to make sure that the volume of soil matches up with the volume of earth that they are excavating. They’ll measure after they install each concrete ring. The rings are installed every 6.5 feet. Bertha’s entire route stretches 1.76 miles long and the drill has only completed 0.21 miles of it so far. How many measurements will they need to take before Bertha is done?

- A. 1260 measurements
- B. 1430 measurements
- C. 1520 measurements
- D. 1600 measurements

5. The sinkhole stretched 35 feet by 20 feet wide on the surface and was 15 feet deep. It took 250 cubic yards of material to fill in the sinkhole. How much more material would have been needed to fill the sinkhole if it had been a rectangular solid with those dimensions.

- A. 110 cubic yards more
- B. 140 cubic yards more
- C. 380 cubic yards more
- D. 390 cubic yards more

6. If each concrete ring is a cylinder with a diameter of 57 feet, how much earth should Bertha be extracting each time the drill clear outs enough space to install one more concrete ring?

- A. 95 cubic yards
- B. 200 cubic yards
- C. 610 cubic yards
- D. 2500 cubic yards

Based on the article “Report: Full time beats part time for community-college success” on page B1 of the Thursday, January 14th, Seattle Times.

7. Researchers studying community college students found that only 38% of them either completed their studies or transferred to a four-year school within three years. Students who were enrolled full-time performed better, completing a degree or transferring 55% of the time. Conversely only 29% of part-time students had only completed degrees or transferred within three years. What fraction of all the students who completed their degrees or transferred were full-time students?

A. $\frac{1}{2}$

B. $\frac{4}{7}$

C. $\frac{5}{8}$

D. $\frac{3}{4}$

8. Examine the graph titled “Report: Full-time students do better in community college” on page B6. Of all the students that the study tracked, what percentage of the students were considered college ready when they started community college?

A. 41%

B. 44%

C. 46%

D. 49%

9. Examine the graph titled “Report: Full-time students do better in community college” on page B6. If full-time status and college-ready are independent variables, what is the probability that some student completing or transferring was a both a full-time student and college ready?

A. 0.04

B. 0.21

C. 0.25

D. 0.28

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