

Sum Up the News – February 29th, 2016

Vocabulary

1. In an equation relating y and x , y is exponentially related to x . If the graph of the equation goes through the points $(0, 10)$ and $(2, 6.4)$, at what rate does y decay?

- A. 20%
- B. 36%
- C. 64%
- D. 80%

2. The line $y = -2x + 5$ is plotted on the coordinate plane. What is the area of the shape bounded by the line, and the lines $x = -2$, $x = 2$, and the x -axis?

- A. 10 square units
- B. 18 square units
- C. 20 square units
- D. 36 square units

3. The ratio of the area of a regular polygon to its perimeter is equal to _____ of the polygon.

- A. half of the apothem
- B. the apothem
- C. double the apothem
- D. the apothem squared

Based on the article “Astronaut: Long mission Mars ‘steppingstone’” on page A6 of the Sunday, February 28th, Seattle Times.

4. . Scott Kelly has been on a 340-day mission for NASA, aboard the International Space Station. The station orbits 249 miles above Earth’s surface, 15.54 times per day. If the Earth’s radius is 3,959 miles, how many miles has Kelly traveled while on this mission?

- A. 65 million miles
- B. 70 million miles
- C. 130 million miles
- D. 140 million miles

5. While he is on the station, how fast (in miles per hour) is Kelly traveling as he orbits the Earth?

- A. 8,600 miles per hour
- B. 13,400 miles per hour
- C. 17,200 miles per hour
- D. 26,400 miles per hour

6. The next major expedition that NASA is planning is a manned mission to Mars that will occur at some point in the 2030s. That trip will take at least 2 ½ years. How much longer than Kelly’s mission will the mission to Mars be?

- A. 27% longer
- B. 63% longer
- C. 170% longer
- D. 270% longer

Based on the article “Sardine populations, long sinking, look even worse in forecast” on page B3 of the Sunday, February 28th, Seattle Times.

7. The supply of sardines in West Coast fishing waters has decreased dramatically and there will likely be a second straight year with no sardine fishing allowed. The projected stock of sardines for this year is 64,422 metric tons of adult sardines, which is 93% less than the sardine stock in 2007. How many metric tons of sardines were there in West Coast fishing waters in 2007?

- A. 69,000 metric tons
- B. 230,000 metric tons
- C. 450,000 metric tons
- D. 920,000 metric tons

8. The projected stock for this year (64,422 metric tons) is one-third less than it was in 2015. By what average amount did the population decrease annually from 2007 to 2015?

- A. 96,000 metric tons
- B. 103,000 metric tons
- C. 106,000 metric tons
- D. 114,000 metric tons

9. When sardine fishing is allowed, the allowable catch of sardines is approximately 2.5% of the total adult stock. If in 2007, the sardine catch was worth \$20 million, what was the approximate price per kilogram that the Western fishing fleet received for the sardines they caught that year? (1 metric ton = 1000 kilograms)

- A. \$0.01/kg
- B. \$0.87/kg
- C. \$1.15/kg
- D. \$1.60/kg

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