

Sum up the News – March 6th, 2017

Vocabulary

1. Which of the following expressions would be a factor of the polynomial $(9 - 4k^6)$?
 - A. $3 + 2k^3$
 - B. $3 - 4k^4$
 - C. $3 - 4k^3$
 - D. $3 + 2k^4$

2. The four vertices of a rectangle JKLM all lie of circle N. \overline{JK} has a length of 7 inches and arc \widehat{KM} has a length of 12.5π inches. What is the area of the rectangle?
 - A. 168 square inches
 - B. 175 square inches
 - C. 182 square inches
 - D. 275 squares inches

3. A sector of a circle has an area of 75π square units. If the circle has a radius of 15 units, then what is the perimeter of the sector?
 - A. $15 + 10\pi$ units
 - B. $30 + 10\pi$ units
 - C. 30π units
 - D. 40π units

Based on the article “Seattle’s soda-tax plan may hurt those it aims to help” on page A1 of the Thursday, March 2nd, Seattle Times

4. The proposed tax on sugary drinks is expected to raise \$16 million next year. The 2-cents-an-ounce tax will raise the cost of a 2-liter bottle of a sugary soft drink by \$1.35. How many liters of sugary drinks are expected to be purchased in Seattle next year?

- A. 12 million liters
- B. 18 million liters
- C. 21 million liters
- D. 24 million liters

5. Examine the graph titled “The demographics of soft drinks” on page A1. Overall, 56% of Seattle’s residents had a sugary drink in the past 30 days. If people identified as white make up 69.5% of the Seattle population, then what percentage of Seattle’s non-white residents had a sugary drink in the last 30 days.

- A. 58%
- B. 61%
- C. 64%
- D. 66%

6. Examine the graph titled “The demographics of soft drinks” on page A1. Assume that racial identification and education level are independent. If a Seattle resident that is Latino and college graduate was interviewed about their consumption of sugary drinks, what is the probability that they had not had a sugary drink in the past 30 days?

- A. 0.15
- B. 0.19
- C. 0.21
- D. 0.64

Based on the article “Amazon to draw on solar energy” on page A8 of the Thursday, March 2nd, Seattle Times.

7. Amazon has 124 facilities in the US and another 149 in other countries. They are building solar project at 15 of those facilities this year and plan to 50 total by the 2020. If that pace of adding solar projects continues, then in what year will half of Amazon’s facilities have solar projects installed?

- A. 2025
- B. 2026
- C. 2027
- D. 2028

8. The fifteen solar projects Amazon is building will combine to produce 41 megawatts of power. The solar projects will typically cover 80% of the facilities power needs. Each megawatt is enough to power 164 typical homes. How many homes could be powered by the power used by an average Amazon facility?

- A. 210 homes
- B. 360 homes
- C. 450 homes
- D. 560 homes

9. Currently Target has the most solar power installed among corporations with 147.5 megawatts of power generated from solar panels installed at 300 locations. It plans to add another 10 MW each year. If Amazon continues to add solar power capacity to its facilities at the current pace, in what year would it surpass Target’s solar power capacity?

- A. 3 years
- B. 5 years
- C. 7 years
- D. 9 years

Based on the article “Ross goes from 0 to 40 in 4.22 seconds” on page C1 of the Sunday, March 5th, Seattle Times.

10. University of Washington receiver John Ross competed at the NFL combine and broke the record for the fastest time in the 40-yard dash. His time of 4.22 seconds beat the old record of 4.24 seconds held by former running back Chris Johnson. How much faster was Ross's average speed than Chris Johnson's in miles per hour?

- A. 0.01 miles per hour faster
- B. 0.02 miles per hour faster
- C. 0.10 miles per hour faster
- D. 0.20 miles per hour faster

11. If Johnson and Ross had been running the race at the same time, how far behind Ross would Johnson have been when Ross crossed the finish line?

- A. $\frac{1}{4}$ inch
- B. 3 inches
- C. $6\frac{1}{2}$ inches
- D. $10\frac{1}{2}$ inches

12. Ross also competed in the broad jump and came in third with a distance of 11 feet 1 inch. If Ross was traveling at the same speed during his jump as he was during his 40-yard run, how long was he in the air during the jump?

- A. 0.39 seconds
- B. 0.56 seconds
- C. 0.83 seconds
- D. 1.17 seconds

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