

Sum up the News – April 18th, 2016

Vocabulary

1. A quadratic equation, $y = 2x^2 + bx + c$, has a discriminant of 100. What is the distance between one of the x-intercepts of the equation and the parabola's line of symmetry?

- A. 2.5 units
- B. 5 units
- C. $5\sqrt{2}$ units
- D. 10 units

2. The equation $y = -2(x + 6)(x + 2)$ is graphed on the coordinate plane. For which values of x is y positive?

- A. $-6 < x < -2$
- B. $x < -6$ and $-2 < x$
- C. $x < 2$ and $6 < x$
- D. $2 < x < 6$

3. Points F, G and H form a scalene triangle. If $\overline{FG} = 7$ units and $\overline{FH} = 13$ units, what is one possible value for the length of \overline{GH} ?

- A. 6 units
- B. 7 units
- C. 15 units
- D. 20 units

Based on the article “Flocking to Buses” on page A1 of the Monday, April 11th, Seattle Times.

4. Seattle had the largest bus ridership increase in the country between 2010 and 2014. Seattle's total workforce grew by 44,000 people during those years and in that same time period, the number of people riding the bus to work increased by 19,000. As of 2014, 78,000 people commuted on the bus, making up 21% of the workforce. What percent of the workforce commuted on the bus in 2010?

- A. 15%

- B. 18%
- C. 21%
- D. 24%

5. The number of people who drive by themselves to work also increased from 2010 to 2014, though by just 9,000. Now 65% of the workforce commutes by themselves in a car. How many people drove solo to work in 2010?

- A. 204,000
- B. 232,000
- C. 241,000
- D. 253,000

6. Examine the graph titled “Commuting trends” on page A1. How many more workers began working from home in the time period from 2010 to 2014 than began biking to work?

- A. 1,600 more
- B. 1,800 more
- C. 2,500 more
- D. 2,900 more

Based on the article “Plastic dominates debris washing up on state’s coastal beaches” on page B1 of the Wednesday, April 13th, Seattle Times.

7. A survey of 17 coastal sites across Washington’s coast yielded 14,827 debris items over two years. Assume that the debris was equally distributed over each mile of coastline. If the coastal sites surveyed have an average length of 2 miles, how many items would wash up on each mile of coast each year?

- A. 220 items per mile
- B. 440 items per mile
- C. 880 items per mile
- D. 3700 items per mile

8. Examine the graph titled “Marine debris on Washington coasts” on page B6. What percent of all the debris found was classified as neither hard plastic nor foamed plastic?

- A. 36%
- B. 44%
- C. 48%
- D. 52%

9. Russ Lewis and a team of his friends regularly patrol a 7-mile stretch of beach looking for debris that has washed ashore. Each year they gather about 10 tons of material. If Lewis and his friends collect debris three times per week, what is the average total weight of the items they pick each time they collect debris from the beaches?

- A. 13 pounds per collection
- B. 64 pounds per collection
- C. 130 pounds per collection
- D. 380 pounds per collection

10. Examine the graph titled “Marine debris on Washington coasts” on page B6. If the pie chart was redrawn so that all the items found were included, how would the measure of the central angle of the sector for plastic bottles change?

- A. decrease by 8.4°
- B. decrease by 4.6°
- C. decrease by 1.3°
- D. increase by 6.3°

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