

Sum up the News – May 24th, 2016

Vocabulary

1. A quadratic function, $g(x)$ has been graphed on the coordinate plane and has its vertex at $(-2, 6)$. If the parabola crosses the y -axis at $(0, -6)$, then which of the following transformations has been applied to the parent function $f(x) = x^2$ in order to produce $g(x)$?

- A. Dilated vertically by a factor of 2 and reflected horizontally
- B. Dilated vertically by a factor of 3 and reflected vertically
- C. Dilated vertically by a factor of $\frac{1}{2}$ and reflected vertically
- D. Dilated vertically by a factor of $\frac{1}{3}$ and reflected horizontally

2. A system of equations is defined by two linear relationships, $12x - 9y = 12$ and $12y + Px = Q$. If the system has no solutions, then which of the following statements is true?

- A. $P = -9$ and $Q \neq 18$
- B. $P = -9$ and $Q \neq -18$
- C. $P = -16$ and $Q \neq 24$
- D. $P = -16$ and $Q \neq -24$

3. A right square pyramid has a height equal to the sides of its base. What is the ratio of base's area to total surface area of the pyramid?

- A. 1 to $(1 + 2\sqrt{2})$
- B. 1 to $(1 + \sqrt{5})$
- C. 1 to 3
- D. 2 to $(2 + \sqrt{5})$

Based on the article “Sea-Tac makes hires to shrink lines” on page B1 of the Friday, May 20th, Seattle Times.

4. Sea-Tac airport served 9.5 million travelers from January through March of this year, a 10% increase from the same period in 2015. In 2015, Sea-Tac set records by serving 42.3 million travelers. If the 10% increase holds true throughout the rest of the year, then how many travelers will Sea-Tac serve in the final 9 months of this year?

- A. 33.7 million
- B. 33.9 million
- C. 37.0 million
- D. 37.3 million

5. Examine the graph titled “Seattle-Tacoma International Airport travelers” on page B1. Responding somewhat late to the increased number of people using the airport, the Port of Seattle approved hiring private contractors to assist the TSA and speed up the security lines. The contractors will cost \$3.3 million. Travelers at major airports pay \$4.50 in facility fees each time they pass through them. Given the increase in travelers, what percent of the additional user fees from last year are being used to pay for the new private screeners?

- A. 15.3%
- B. 21.6%
- C. 78.1%
- D. 88.1%

6. Examine the graph titled “Seattle-Tacoma International Airport travelers” on page B1. From the recent low point in in 2009, the number of travelers passing through SeaTac has grown exponentially. If this rate of exponential growth continues through 2016, how many travelers would SeaTac have this year?

- A. 44.5 million
- B. 46.5 million
- C. 47.1 million
- D. 47.7 million

Based on the article “CANO” on page C1 of the Sunday, May 22nd, Seattle Times.

7. Robinson Cano has bounced back after a rough 2015 season and is currently among the league’s leaders in home runs, with 12 through 42 games. Cano hit 17 home runs in the last 82 games he played in 2015. If he hits home runs at that pace for the rest of this year how many will he end the year with? Assume that Cano plays in all 162 games this season.

- A. 25 home runs
- B. 37 home runs
- C. 42 home runs
- D. 46 home runs

8. Examine the table titled “New year party” on page C1. A player’s batting average is calculated by dividing their number of hits by the number of at-bats they have. Cano played in 155 games last year. Assume that Cano had the same number of at-bats per game during the entire season. After the first 42 games, what was Cano’s batting average for the remainder of the 2015 season?

- A. 0.300
- B. 0.309
- C. 0.317
- D. 0.321

9. Last year, after Edgar Martinez took over as the team’s hitting coach, Cano dramatically improved his hitting and his batting average for the remaining games was 0.317. Assume that Cano continued to struggle up until Martinez took over and that his batting average remained at 0.253. For how many games did Cano have Martinez as a hitting coach?

- A. 73 games
- B. 77 games
- C. 82 games
- D. 85 games

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