

## Sum up the News – January 4<sup>th</sup>, 2016

### Vocabulary

1. If  $x$  and  $y$  are both integers with  $x < 0$  and  $y < x$ , then  $\frac{1}{\sqrt{xy}}$  must be

\_\_\_\_\_.

- A. neither real nor rational.
- B. real
- C. rational
- D. both real and rational

2. If  $x$  is a variable and  $k$  is some constant, then the product of  $(x^2 + k)$  and  $(x^2 - k)$  is a

\_\_\_\_\_.

- A. 2<sup>nd</sup> degree binomial
- B. 2<sup>nd</sup> degree trinomial
- C. 4<sup>th</sup> degree binomial
- D. 4<sup>th</sup> degree trinomial

3. If the longer leg of a right triangle is as long as 40% of its perimeter, how large is the smaller leg of the triangle?

- A. 12.5% of the perimeter
- B. 16.7% of the perimeter
- C. 20% of the perimeter
- D. 25% of the perimeter

**Based on the article “M’S PAYROLL FALLS SHORT OF BASEBALL’S NEW NORMAL” on page D1 of the Monday, December 28<sup>th</sup>, Seattle Times.**

4. The mean salary in baseball last year was \$3.95 million. The mean salary has increased by 28% since 2011 and by 3.5% since last year. What was the average annual percentage increase for the league-average salary from 2011 to 2014?

- A. 6.2%
- B. 7.3%
- C. 8.2%
- D. 8.6%

5. If a typical player was going to be paid \$10 million in 2011, that player would have made \$12.8 million in 2015. Another 3.5% annual increase would push their 2016 salary to \$13.2 million. If the increase this coming offseason instead tracks with the average percentage increase for the previous 4 years, how much would the player be paid in 2016?

- A. 13.4 million
- B. 13.5 million
- C. 13.6 million
- D. 13.7 million

6. Examine the table’s titled “Mariners payroll” and “Baseball player salaries” on page D2. The payroll totals in the Mariners table is for 40 players. In how many of the years listed in the tables did the Mariners’ average salary exceed the league’s average salary?

- A. 0 years
- B. 1 year
- C. 2 years
- D. 3 years

**Based on the article “LATE HOLIDAY GIFT: A DAY WITHOUT RAIN” on page A1 of the Tuesday, December 29<sup>th</sup>, Seattle Times.**

7. Through 28 days, this December has been significantly rainier in Seattle than in recent years. 11.19 inches of rain have fallen this December, compared with the historical average of 5.35 inches for the entire month. Through the first 28 days, how much more rain has a typical day had this December than is normal?

- A. 0.19 inches per day more
- B. 0.23 inches per day more
- C. 0.32 inches per day more
- D. 0.4 inches per day more

8. Examine the graph titled “Seattle’s wet December” on page A1. What was the median rainfall in December for the years 2001-2015?

- A. 4.8 inches
- B. 5.4 inches
- C. 5.9 inches
- D. 6.1 inches

9. Examine the graph titled “Warmest year on record” on page A1. If the average temperature at SeaTac had increased at a constant rate since 1945, how much would the average temperature have increased each decade?

- A. 0.07 degrees per decade
- B. 0.49 degrees per decade
- C. 0.7 degrees per decade
- D. 1.1 degrees per decade

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