### Sum up the News – December 14<sup>th</sup> - 2015

### Vocabulary

1. If the series  $S_N$  is the sum of the first N prime numbers, then which of the following expressions is equal to  $S_7$ ?

A. 13 B.  $S_6 + 1$ C.  $S_6 + 13$ D.  $S_6 + 17$ 

2. Quadrilateral JKLM has diagonals  $\overline{JL}$  and  $\overline{KM}$  that meet at point N. If  $\overline{JN} = \overline{NL}$  and  $\overline{KN} = \overline{NM}$ , then JKLM must be a \_\_\_\_\_.

A. kite

B. parallelogram

C. rectangle

D. rhombus

3. Line  $\overrightarrow{FG}$  intersects circle M at just one point. If point G is on the circle, then  $\overrightarrow{FG}$  and  $\overline{GM}$  are

A. congruent

B. parallel

- C. perpendicular
- D. symmetrical

# Based on the article "Storms' '1-2-3 punch' packs flood, slide risks" on page A1 of the Saturday, December 8<sup>th</sup>, Seattle Times.

4. The Seattle area experienced 3.2 inches of rain through the first 7 days of the month, far more than the historical average of 1.35 inches. During the 8<sup>th</sup> and 9<sup>th</sup> of December, storms were expected to bring a total of an additional 2.5 inches of rain. By how much would the average daily rainfall increase for the days in December this year if these predictions had come true?

- A. 0.19 inches per day more
- B. 0.41 inches per day more
- C. 0.63 inches per day more

5. Examine the graph titled "Rain so far this month" on page A1. If the daily average rain experienced so far this month continues throughout December, then how much more rain will the Seattle area receive this December than was expected based on historical averages?

- A. 6 inches more
- B. 7.1 inches more
- C. 8.2 inches more
- D. 14 inches more

6. Examine the graph titled "Wet weather" on page A8. What was the median two-day rain total for the week of December 1-7?

- A. 0.60 inches
- B. 0.65 inches
- C. 0.70 inches
- D. 0.82 inches

# Based on the article "Boeing debuts first MAX, new production line" on page A14 of the Wednesday, December 9<sup>th</sup>, Seattle Times.

7. Boeing's Renton assembly plant previously had room for two assembly lines each producing 21 jets per month. They've since added a 737MAX line that by the end of the decade should allow the plant to produce 60 jets per month by 2020. By how much will this extra line decrease the plant's rate of hours per jet produced?

- A. 3 fewer hours between jets
- B. 5 fewer hours between jets
- C. 9 fewer hours between jets
- D. 14 fewer hours between jets

8. The launch of Boeing's 737MAX was delayed and prior to its December 2011 release Boeing's rival Airbus launched their own new narrow-body jet, the A320neo. Airbus had already booked 1,000 orders for the A320neo by December of 2011 and now holds a lead over Boeing in total narrow-body orders of 4,443 to 2,955. How many total orders for narrow-body jets have there been per month since the 737Max launched?

A. 62

- B. 75
- C. 133
- D. 154

9. The 737MAX was designed to maximize fuel efficiency and it can fly about 14% further on the same amount of jet fuel as its predecessors. It used to take 737's about 22 gallons per passenger to fly 1,000 miles. The 737Max holds 175 passengers in its typical format. If jet fuel is currently selling for \$1.20 per gallon, how much money on fuel costs would an airline save by flying a full 737MAX the 2,421 miles from SeaTac to New York?

- A. \$570
- B. \$1370
- C. \$1570
- D. \$4050

10. The fuselages for the 737MAX are delivered to the Renton plant from Wichita, Kansas. The fuselages are roughly shaped like cylinders. The most common 737MAX is 129 feet 8 inches long and they have an approximate interior volume of 15,500 cubic feet. What is the approximate interior width of the 737MAX fuselage?

A. 6.2 feetB. 10.9 feetC. 12.3 feetD. 15.4 feet

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