

## Sum up the News – November 9<sup>th</sup>, 2015

### Vocabulary

1. If a quantity has increased by a growth factor of  $K$  over a time period of  $N$  years, what was the quantity's average monthly growth factor for that time period?

- A.  $K^{1/N}$
- B.  $K^{12/N}$
- C.  $\frac{K^{1/N}}{12}$
- D.  $K^{1/12N}$

2. If  $x$  is a prime number, then which of the following expression can be expressed as a ratio of integers?

- A.  $x + \sqrt{x}$
- B.  $x * \sqrt{x}$
- C.  $\sqrt{x} + \sqrt{x}$
- D.  $\sqrt{x} * \sqrt{x}$

3. Circle  $M$  circumscribes triangle  $FGH$ . If  $\angle GMF$  has a measure of  $50^\circ$ , then  $\triangle FGM$  must be \_\_\_\_\_ triangle.

- A. an equilateral
- B. an isosceles
- C. an obtuse
- D. a scalene

**Based on the article “Office tenants devour more space in Seattle than in NYC” on page A14 of the Wednesday, November 4<sup>th</sup>, Seattle Times.**

4. Across downtown Seattle there is 45 million square feet of office space and just 7.8% of it is vacant. The average annual rent has climbed to \$38.26 per square foot. What is the total monthly rent that is being paid for office space in downtown Seattle?

- A. \$110 million per month
- B. \$130 million per month
- C. \$140 million per month
- D. \$160 million per month

5. In 2010, when Amazon moved from Beacon Hill to its South Lake Union campus, it had just 2.3 million square feet of office space. By the end of this year it will have expanded to a total of 6.0 million square feet and will have another 1.9 million square feet under construction. At what average annual percentage rate has Amazon’s office space grown since they moved to South Lake Union?

- A. 21% per year
- B. 28% per year
- C. 32% per year
- D. 52% per year

6. Examine the graph on titled “Seattle led in newly occupied space” on page A14. On average, how much occupied office space did Seattle add each month during the 1<sup>st</sup> and 2<sup>nd</sup> quarters of the year?

- A. 50,000 square feet
- B. 100,000 square feet
- C. 200,000 square feet
- D. 300,000 square feet

**Based on the article “Pike Place Market’s gum wall getting scrub down, fresh start” on page B1 of the Wednesday, November 4<sup>th</sup>, Seattle Times.**

7. Early estimates about the amount of gum on the wall indicate that 1 million pieces have been placed there. Gum weighs an average of 1.2g before being chewed but loses 70% of its mass after being chewed. How many pounds of gum have been stuck to the gum wall? (1 kilogram  $\approx$  2.2 pounds)

- A. 360 pounds
- B. 800 pounds
- C. 1,200 pounds
- D. 2,600 pounds

8. The rectangular gum wall stretches 50 feet along the bricks and reaches a height of 15 feet. The layers of chewed, hardened gum are estimated to be up to 6 inches deep in some places. If 6 pieces of un-chewed gum have a volume of 1 cubic inch, but gum loses volume in the same proportion as it loses weight, what is the average thickness of gum on the gum wall in inches?

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

9. It has been 20 years since the wall was last fully cleaned, but it is treated every other month with a steam cleaner. What is the average number of pieces of gum that have been added to the wall between each of these steam treatments?

- A. 2000 pieces of gum
- B. 4000 pieces of gum
- C. 8000 pieces of gum
- D. 50,000 pieces of gum

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