

Sum up the News – November 14th, 2016

Vocabulary

1. A quadratic equation has a vertex at the point (3, -8) and the equation has a discriminant of -10. What is one possible location for the graph's y-intercept?
 - A. (0, -12)
 - B. (0, -8)
 - C. (0, -4)
 - D. (0, 6)

2. The quadratic function $f(x) = x^2 - 6x - 16$ is transformed so that its image is mapped onto the function $g(x) = (x - 4)^2 - 10$. What transformations were applied to $f(x)$?
 - A. $f(x)$ was translated 2 units to the left and 6 units down
 - B. $f(x)$ was translated 1 unit to the left and 15 units down
 - C. $f(x)$ was translated 1 unit to the right and 15 units up
 - D. $f(x)$ was translated 2 units to the right and 22 units up

3. A triangle is formed by intersection of three lines on the coordinate plane: the x-axis, y-axis and the line M: $y = -0.75x - 5$. What is the tangent of the triangle's internal angle formed by line M and the y-axis?
 - A. 0.75
 - B. 0.80
 - C. 1.13
 - D. 1.33

Based on the article “Employers gird for statewide minimum-wage hike to \$13.50” on page B4 of the Thursday, November 10th, Seattle Times.

4. The new state minimum wage that passed on Tuesday will gradually raise the minimum wage over the next four years to \$13.50 per hour state wide, up from its current level of \$9.47 per hour. Absent the new law the minimum wage was expected to increase to \$10.28 by 2020, as it is adjusted each year according to the local cost-of-living. The minimum wage will continue to increase according to cost-of-living changes after 2020, but now from a higher baseline. If the cost-of-living increases remain consistent, what will the Washington State minimum wage be in 2022?

- A. \$13.78
- B. \$13.91
- C. \$14.01
- D. \$14.06

5. The minimum wage law passed statewide with 59% of the vote. Inside King County, where the minimum wage has already been increased, the law passed with 72% of the vote. If King County comprises 30% of the state population and turnout was roughly the same across the state, what percentage of people outside of King County voted to increase the minimum wage?

- A. 37%
- B. 46%
- C. 53%
- D. 57%

6. The owner of a coffee shop and restaurant estimated that the new law would increase his payroll costs by 8%. Of his fourteen employees, ten would have their wages increased by the new law, to \$11 per hour this year. Assume that all of his employees work equal hours. If his employees whose wages won't increase make \$14 per hour on average, then how much were the ten other employees earning on average?

- A. \$9.62 per hour
- B. \$9.77 per hour
- C. \$9.95 per hour
- D. \$10.19 per hour

Based on the article “Crowds at India’s banks to exchange banned rupee notes” on page A2 of the Friday, November 11th, Seattle Times.

7. The Indian government, hoping to increase tax revenues and decrease corruption, is withdrawing from circulation all of its 500 rupee and 1000 rupee notes. These denominations make up the vast majority of rupees in circulation. The 22.03 billion notes being withdrawn currently have a combined value of 14.18 trillion rupees, but in a couple weeks, they’ll have no value at all. What percentage of the notes being withdrawn are of the 1000 rupee denomination?

- A. 23.7%
- B. 25.4%
- C. 27.5%
- D. 29.4%

8. The median amount of family wealth in India is \$4172 per family. For the next two weeks, people will be able to exchange up to 4000 rupees per day, equal to \$60, at banks of the notes being withdrawn for smaller denominations that will still have value. Banks are closed every other Saturday. If a 1/4 of a typical family’s wealth is held in cash, all in 500 and 1000 rupee notes, and they exchange the maximum possible amount each day, how much of that cash will become worthless in two weeks?

- A. 13,500 rupees
- B. 17,500 rupees
- C. 52,000 rupees
- D. 69,500 rupees

9. The notes being withdrawn by value account for 85% of all the paper rupees in circulation. What will the value in U.S. dollars be of the cash remaining in circulation after the 500 and 1000 rupees notes are withdrawn?

- A. \$32.0 billion
- B. \$37.5 billion
- C. \$181 billion
- D. \$250 billion

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