Algebra 2 Bellwork Wednesday, September 30, 2015

Practice SAT/PSAT-NMSQT Math Questions

1. The mean number of students per classroom, y, at Central High School can be estimated using the equation $y = 0.8636x + 27.227$ where x represents the number of years since 2004 and $x \leq 10$ Which of the following statements is the best interpretation of the number 0.8636 in the context of this problem?

A. The estimated mean number of students per classroom in 2004

B. The estimated mean number of students per classroom in 2014

C. The estimated yearly decrease in the mean number of students per classroom

D. The estimated yearly increase in the mean number of students per classroom

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2. If $\frac{2}{a-1} = \frac{4}{y}$ where $y \neq 0$ and $a \neq 1$, what is y in terms of a?

A. $y = 2a - 2$

B. $y = 2a - 4$

C. $y = 2a - \frac{1}{2}$

D. $y = \frac{1}{2}a + 1$

3. If $y = x^3 + 2x + 5$ and $z = x^2 + 7x + 1$, what is $2y + z$ in terms of x?

A. $3x^3 + 11x + 11$

B. $2x^3 + x^2 + 9x + 6$

C. $2x^3 + x^2 + 11x + 11$

D. $2x^3 + 2x^2 + 18x + 12$

4. $\frac{5(k+2)-7}{6} = \frac{13-(4-k)}{9}$

In the above equation, what is the value of k?

A. $\frac{9}{17}$ B. $\frac{9}{13}$

C. $\frac{33}{17}$ D. $\frac{33}{13}$

Bellwork Answers:

1. D

2. A

3. C

4. B