

Math III Spiral Review 6 {Due Friday 3.25}

1. Let $f(x) = 14x^3 + 28x^2 - 46x$ and $g(x) = 2x + 7$. Which is the solution set to the equation $\frac{1}{12}f(x) = g(x)$?
- A $\{-3, 0, 1\}$
 - B $\{-3, -1, 2\}$
 - C $\{-2, 1, 3\}$
 - D $\{1, 5, 11\}$
2. The equation $2x^2 - 5x = -12$ is rewritten in the form of $2(x - p)^2 + q = 0$. What is the value of q ?
- A $\frac{167}{16}$
 - B $\frac{71}{8}$
 - C $\frac{25}{8}$
 - D $\frac{25}{16}$
3. A reporter wants to know the percentage of voters in the state who support building a new highway. What is the reporter's population?
- A the number of people who live in the state
 - B the people who were interviewed in the state
 - C all voters over 25 years old in the state
 - D all eligible voters in the state
4. In a set of test scores that are normally distributed, a test score of 76 is 3 standard deviations below the mean. A score of 88 is 1 standard deviation above the mean. What is the mean of the data?
- A 79
 - B 82
 - C 84
 - D 85
5. Which function is equivalent to $y = x^2 - 6x + 10$?
- A $y = (x + 3)^2 - 1$
 - B $y = (x - 3)^2 + 1$
 - C $y = (x + 6)^2 - 10$
 - D $y = (x - 6)^2 + 10$
6. The volume of a rectangular prism is represented by the expression $(x^3 - 2x^2 - 20x - 24)$. If the length is $(x - 6)$ and the height and width are equal, what is the width of the prism?
- A $x + 2$
 - B $x - 2$
 - C $x + 4$
 - D $x - 4$

7. Suppose $p(x) = x^3 - 2x^2 + 13x + k$. The remainder of the division of $p(x)$ by $(x + 1)$ is -8 . What is the remainder of the division of $p(x)$ by $(x - 1)$?
- A. -8
B. 8
C. 16
D. 20
8. Which polynomial function has zeroes at $-4, 3,$ and 5 ?
- A. $f(x) = (x + 4)(x + 3)(x + 5)$
B. $g(x) = (x + 4)(x - 3)(x - 5)$
C. $h(x) = (x - 4)(x - 3)(x - 5)$
D. $k(x) = (x - 4)(x + 3)(x + 5)$
9. Which is not a factor of $x^3 - x^2 - 17x - 15$?
- A. $x - 5$ B. $x + 1$ C. $x + 3$ D. $x + 5$
10. What are the zeroes of the polynomial function $y = 2x^3 - 7x^2 + 2x + 3$?
- A. $\frac{1}{2}, 1, 3$ B. $-1, 1, 3$ C. $-\frac{1}{2}, 1, 3$ D. $-3, \frac{1}{2}, 1$