COMPASS Worksheet A Name _____

A1. If x = -1 and y = 3, what is the value of the expression $3x^3 - 2xy$?

○ A. -9 ○ B. -3 ○ C. 3 ○ D. 9 ○ E. 21

A2. Which of the following expressions represents the product of three less than x and five more than twice x ?

○ A. $2x^2 + 11x + 15$
○ B. $2x^2 - 11x + 15$
○ C. $2x^2 + x - 15$
○ D. $2x^2 - x - 15$
○ E. $2x^2 + 22x + 15$

A3. A student earned scores of 83, 78, and 77 on three of four tests. What must the student score on the fourth test to have an average (arithmetic mean) of exactly 80?

○ A. 80
○ B. 82
○ C. 84
○ D. 85
○ E. 86

A4. What is the equation of the line that contains the points (2, 3) and (14 , - 6)

○ A. $y = \frac{-3}{4}x + 5$
○ B. $y = \frac{-3}{4}x + \frac{9}{2}$
○ C. $y = \frac{3}{4}x + 5$
○ D. $y = \frac{-4}{3}x + \frac{17}{3}$
○ E. $y = \frac{-1}{2}x + \frac{5}{2}$

A5. For all $x \neq \pm 4$, $\frac{x^2 - x - 20}{x^2 - 16} = ?$

○ A. $\frac{x+5}{x-4}$
○ B. $\frac{x+4}{x+4}$
○ C. $\frac{x-5}{x+4}$
○ D. $\frac{x+5}{x+4}$
○ E. $\frac{x-5}{x-4}$

A6. A rope 36 feet long is cut into three pieces, the second piece is four feet longer than the first, the last piece is three times as long as the second. If x represents the length of the first piece, then which equation determines the length of the first piece?

O A. $36 = 5x + 8$
O B. $36 = x + (x + 4) + (3x)$
O C. $36 = 3x + 12$
O D. $36 = x + (x + 4) + 3(x + 4)$
O E. $36 = 3x + 16$

A7. The product $(x^2 + 3)(x - 1)$ is

O A. $x^3 + 3x^2 - x - 3$
O B. $x^2 + 2x - 3$
O C. $3x - 3$
O D. $x^3 - 3$
O E. $x^3 - x^2 + 3x - 3$

A8. If n is an integer which expression must be an even integer?

O A. $2n + 1$
O B. $2n - 1$
O C. $n + 1$
O D. $2n^2$
O E. n^2

A9. If $x = -3$, what is the value of $2x^2 + 3x - 5$?

O A. -22
O B. -6
O C. -5
O D. 4
O E. 22

10. Which of the following is the complete factorization of $2x^2 - 13x - 24$?

O A. $(2x - 6)(x + 4)$
O B. $(x - 6)(2x + 4)$
O C. $(2x - 3)(x - 8)$
O D. $(2x + 3)(x - 8)$
O E. $2(x + 3)(x - 4)$

Solutions:
1C 2D 3B 4B 5E 6D 7E 8D 9D 10D