Polynomials and Factoring MCAS Worksheet 1   Name _____

1 Which of the following is equivalent to the expression below?

Mark your answer here: 1. Ⓐ Ⓑ Ⓒ Ⓓ

$$x^2 + 3x - 5x^2 + 6$$

A. $-4x^2 + 3x + 6$

B. $4x^2 + 3x + 6$

C. $x^2 - 2x + 6$

D. $x^2 + 2x + 6$

2 Which of the following shows the expression below in factored form?

Mark your answer here: 2. Ⓐ Ⓑ Ⓒ Ⓓ

$$4y^3 + 6y^2 - 14y$$

A. $2y(2y^2 + 3y - 7)$

B. $4y(y^2 + 2y - 10)$

C. $2y^2(2y + 3 - 7y)$

D. $4y^2(y + 2 - 10y)$

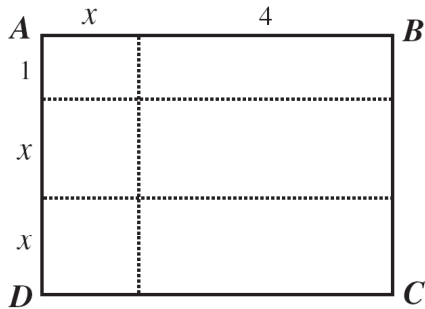**3**   Which of the following shows the expression below in factored form?

$$x^2 + 2x - 8$$

A. $(x - 2)(x + 4)$

B. $(x + 2)(x - 4)$

C. $(x - 1)(x + 8)$

D. $(x + 1)(x - 8)$

Mark your answer here: 3. Ⓐ Ⓑ Ⓒ Ⓓ

4   In the figure below, rectangle $ABCD$ contains six smaller rectangles with dimensions shown.

Mark your answer here: 4. Ⓐ Ⓑ Ⓒ Ⓓ
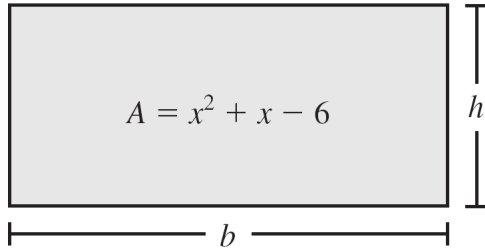

Which of the following represents the area of rectangle $ABCD$?

A. $(x + 4) + (2x + 1)$

B. $2[(x + 4) + (2x + 1)]$

C. $2x \cdot x + 4 \cdot 1$

D. $(x + 4)(2x + 1)$

5 A rectangle and an equation representing its area, A, are shown below.

Mark your answer here: 5. Ⓐ Ⓑ Ⓒ Ⓓ

$$A = x^2 + x - 6$$

h

b

Which of the following could represent b, the length of the base of the rectangle, and h, the height of the rectangle?

A. $b = (x - 3); h = (x - 2)$

B. $b = (x - 3); h = (x + 2)$

C. $b = (x + 3); h = (x + 2)$

D. $b = (x + 3); h = (x - 2)$

6 Which of the following is a factor of the polynomial below?

Mark your answer here: 6. Ⓐ Ⓑ Ⓒ Ⓓ

$$4x^3y - 8x^2y^2 + 10xy^3$$

A. $4y^2$

B. $2x^2$

C. $2xy$

D. x^2y^2

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7   Which of the following is equivalent to expression below?

$$(x - 2)(2x^2 + 3) + x^3 - 2x$$

A. $3x^3 - 2x - 6$

B. $3x^3 + x - 6$

C. $3x^3 - x^2 - 2x - 6$

D. $3x^3 - 4x^2 + x - 6$

Mark your answer here: 7. Ⓐ Ⓑ Ⓒ Ⓓ

8   Which of the following is a factor of the polynomial shown below?

$$9x^4 + 12x^3y + 6x^2$$

A. $12y$

B. $3x^2$

C. $6x^2$

D. $3x^3$

Mark your answer here: 8. Ⓐ Ⓑ Ⓒ Ⓓ

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