1. Write a polynomial product which shows the area of the original rectangle before being divided into 4 smaller rectangles. Then simplify the polynomial product.

2. Given $2x^2 + 5x - 12$ and $2x - 3$, find the sum, difference, product and quotient of these polynomials.

3. If $x \neq 0, y \neq 0,$ and $z \neq 0$, then

$$\frac{36x^6y^5z^{-2}}{12x^{-2}y^3z^2} =$$

A. $3x^4$
B. $\frac{3x^8}{z^4}$
C. $3x^4z^{-4}$
D. $3x^8y^{10}z^4$

4. $(2a^2b^3 - 10ab + b^2) - (-3a^2b^3 - 20ab - 17b^2)$ is equivalent to –

A. $-a^2b^3 - 30ab - 16b^2$
B. $a^2b^3 + 30ab + 16b^2$
C. $5a^2b^3 - 10ab - 18b^2$
D. $5a^2b^3 + 10ab + 18b^2$
5. Which of the following is NOT a factor of $4x^2 + 20x + 24$?
   A. 4
   B. $x+6$
   C. $x+3$
   D. $x+2$

6. Factor the expression $8x^2 - 18$
   A. $(2x+9)(4x-2)$
   B. $(8x-9)(x+2)$
   C. $2(2x+3)(2x-3)$
   D. $2(x-9)(4x+1)$