Polynomial Work Sheet--Math 4 SN

1. What polynomial must be added to the trinomial $6x^2 - 5x + 4$ in order to obtain the trinomial $x^2 - 2x - 6$?

2. What polynomial multiplied by $(x + 3)$ equals $(x^2 + 2x - 3)$?

3. Subtract $3x^2 - 2x + 5$ from $2x^2 + 5x - 2$.

4. If the side of a square is $(2x + 3)$ cm, what polynomial represents its perimeter? What polynomial represents its area?

5. Is the binomial $2x - 3$ a factor of $6x^3 - 5x^2 + 8x - 6$? Justify your answer.

6. What is the second factor of $(11x^2 - 26x - 21)$ if the first factor is $x - 3$?

7. The length of a rectangular lot is $(5x + 4y)$ m. Its width is $(2x - y)$ m less than the length. What polynomial represents the perimeter of the lot? What polynomial represents the area of the lot?

8. Calculate the mean of $(x + 3)$, $(2x - 5)$ and $(6x - 1)$.

9. Rewrite $2x^2 + x - 15$ as a product of $x + 3$ and another binomial.

10. Subtract the sum of $3x^2 - 5x + 8$ and $-5x^2 + 7x - 1$ from $8x^2 + 2x - 5$.

11. What is the product of (5x-1) and (2x+7)?

12. The area of a rectangle is $(5x^2 - 20x)$ cm². What algebraic expression could represent the length and width?

Answers

7. $P = (16x + 18y)$
   $A = (15x^2 + 37xy + 20y^2)$

1. $(-5x^2 + 3x - 10)$
2. $(x-1)$
3. $(-x^2 + 7x - 7)$
4. $P = (8x + 12)$ units $A = (4x^2 + 12x + 9)$ units²
5. No, it's not a factor because there is a remainder of 15.
6. $(11x + 7)$

8. $(3x-1)$
9. $(x+3)(2x-5)$
10. $(10x^2 - 12)$
11. $(10x^2 + 33x - 7)$
12. 5x and x-4