Math 3 Advanced

2Sem Unit 1 Quiz

1. Find the inverse relation to the following function:
$$f(x) = 5x - 2$$

2. Determine the domain interval in the following function that contains a local maximum.
$$f(x) = (x + 8)(x)(x - 4)$$

3. Determine the domain interval in the following function that contains a local minimum.
$$f(x) = x^3 - 9x$$

4. Simplify the following polynomial expression.
$$(2x^2 - 9x + 20) - (5x^2 + 8x - 11)$$

5. Simplify the following polynomial expression.
$$(x + 5)(x^2 - 3x + 7)$$

6. Perform the following binomial expansion.
$$(3x - 2)^4$$

7. Find the fourth term in the following binomial expansion.
$$(x - 3)^6$$

8. Find the third term in the following binomial expansion.
$$(3x + 2)^5$$

9. Simplify the following polynomial expression.
$$(x^3 - 1) \div (x - 1)$$

10. Simplify the following polynomial expression.
$$(x^2 + 7x - 11) \div (x - 4)$$