

Worksheet 1

Sections 1.13, 12.6

Sections 1.3 and 12.6

Problem 1. Fully simplify $2(2 - 5t) + t^2(t - 1) - (t^4 - 1)$.

Problem 2. Fully simplify $(x - 1 + x^2)(x - 1 - x^2)$.

Problem 3. Use Pascal's Triangle to expand and simplify $(2x + 1)^4$.

Problem 4. Factor the trinomial $3x^2 - 16x + 5$.

Problem 5. Factor the trinomial $(3x + 2)^2 + 8(3x + 2) + 12$.

Problem 6. Use a special factoring formula to factor the expression $8s^3 - 125t^3$.

Section 1.4

Problem 6. Find the domain of the expression

$$\frac{\sqrt{x-1}}{x-7}.$$

Problem 7. Perform the addition and/or subtraction and fully simplify.

$$\frac{4}{x} + \frac{6}{x-9} - \frac{3}{x^2-9x}.$$