Exercise 1: (1 pto) Take out common factors:

a) $14ab^3 + 21a^4b - 35a^2b^7 =$

b) $25x^5 - 20x^4 - 10x^3 + 5x^2 =$

Exercise 2: (1.5 ptos) If $P(x) = 3x^2 - 9x + 8$, $Q(x) = 4x^2 - 2x - 8$ and $R(x) = 2x - 3$ work out:

a) $P + Q =$

b) $P - Q =$

c) $P \cdot R =$

Exercise 3: (1 pto) Expand using quadratic multiplication formulas:

a) $(x - 7)^2 =$ b) $(3x - 1)(3x + 1) =$ c) $(2x - 3)^2 =$

Exercise 4: (1 pto) Work out:

a) $\dfrac{x}{3} = 2 - \dfrac{3x - 1}{4}$

b) $\dfrac{x + 3}{3x - 2} = \dfrac{8}{5}$

Exercise 5: (2 ptos) Solve these equations without using the formula:

a) $2x^2 - 50x = 0$ b) $7x^2 + 9x = 0$

c) $16x^2 - 49 = 0$ d) $16x^2 - 4 = 0$

Exercise 6: (2 ptos) Work out:

a) $x^2 - 6x - 7 = 0$ b) $x^2 - 7x + 10 = 0$

c) $x^2 - 8x + 16 = 0$ d) $6x^2 - 5x + 1 = 0$

Exercise 7: (1 pto) Work out $(x + 3)^2 - 11 = 5x$

Exercise 8: (0.5 ptos) Evaluate the polynomial $P(x) = 3x^2 - 5x + 6$ when $x = 2$