3.6 – Add and Subtract Polynomials

MPM1D

1. $(2x - 7) + (3x + 8)$ simplified is:

   A) $5x - 15$
   B) $5x - 1$
   C) $5x + 1$
   D) $6x - 56$

2. Simplify by removing brackets and collecting like terms

a) $(3x + 4) + (7x + 5)$ b) $(y + 2) + (3 + 6y)$ c) $(4m - 1) + (3m - 8)$

d) $(5 - 3d) + (d - 6)$ e) $(4k - 3) + (5 + k) + (5k + 3)$

3. $(3x - 5) - (x - 4)$ simplified is:

   A) $2x - 1$
   B) $2x + 1$
   C) $2x - 9$
   D) $2x + 9$

4. Simplify

a) $(2x + 3) - (x + 6)$

b) $(8x + 5) - (x + 5)$

c) $(6m + 4) - (2m + 1)$

d) $(4v - 9) - (8 - 3v)$

e) $(9 - 6w) - (-6w - 8)$

f) $(5h + 9) - (-5h + 6)$

5. Simplify

a) $(7x - 9) + (x - 4)$

b) $(8c - 6) - (c + 7)$

c) $(3p^2 - 8p + 1) + (9p^2 + 4p - 1)$

d) $(5xy^2 + 6x - 7y) - (3xy^2 - 6x + 7y)$

e) $(4x - 3) + (x + 8) - (2x - 5)$

f) $(2uv^2 - 3v) - (v + 3u) + (4uv^2 - 9u)$

6. A women's basketball team gives their players a bonus of $100 on top of their base salary for every 3-point basket. Data for some of the team's players are given.

Player	Base Salary ($1000s)	3-Point Baskets
Gomez	50	25
Henreid	40	20
Jones	100	44

a) Find a simplified expression for the total earnings for these three players.

b) Find the total earnings for these three players.

7. A swimming pool manufacturer installs rectangular pools whose length is twice the width, plus 5 m.

a) Draw a diagram of the pool and label the length and width using algebraic expressions.

b) Find a simplified algebraic expression that represents the perimeter of the pool.

c) What is the perimeter if the width of the pool is 6 m?