

### 3.6 – Add and Subtract Polynomials

MPM1D

Jensen

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)  $(3x + 4) + (7x + 5)$

$10x + 9$

b)  $(y + 2) + (3 + 6y)$

$7y + 5$

c)  $(4m - 1) + (3m - 8)$

$7m - 9$

d)  $(5 - 3d) + (d - 6)$

$-2d - 1$

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

$10k + 5$

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

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

4. Simplify

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

$$x - 3$$

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

$$7x$$

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

$$4m + 3$$

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

$$7v - 17$$

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

$$17$$

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

$$10h + 3$$

5. Simplify

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

$$8x - 13$$

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

$$7c - 13$$

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

$$12p^2 - 4p$$

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

$$2xy^2 + 12x - 14y$$

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

$3x + 10$

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

$6uv^2 - 4v - 12u$

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.

$E = 50,000 + 40,000 + 100,000 + 100(b)$

$E = 190,000 + 100(b)$

b) Find the total earnings for these three players.

$E = 190,000 + 100(25 + 20 + 44)$

$E = 190,000 + 100(89)$

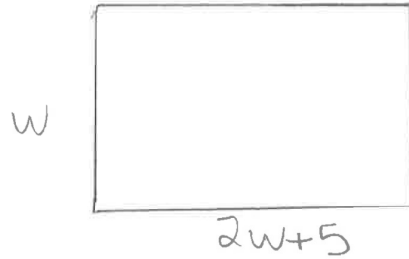
$E = 190,000 + 8,900$

$E = 198,900$

$\$198,900$

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.

$$P = w + w + 2w + 5 + 2w + 5$$
$$P = 6w + 10$$

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

$$P = 6(6) + 10$$
$$P = 46 \text{ m}$$