5.3 Practice – Adding Polynomials

**1.** Use algebra tiles to model each sum. Sketch your tile model. Record your answer symbolically.

**a)** (– 4*h* + 1) + (6*h* + 3) **b)** (2*a*2 + *a*) + (–5*a*2 + 3*a*)

**c)** (3*y*2 – 2*y* + 5) + (–*y*2 + 6*y* + 3) **d)** (3 – 2*y + y*2) + (–1 + *y* –3*y*2)

**2.** Add these polynomials. Use algebra tiles if it helps.

**a)** (*x* – 5) + (2*x* + 2) **b)** (*b*2 + 3*b*) + (*b*2 – 3*b*)

**c)** (*y*2 + 6*y*) + (–7*y*2 + 2*y*) **d)** (5*n*2 + 5) + (–1 –3*n*2)

**3.** Add these polynomials. Use algebra tiles if it helps.

**a)** (–7*x* + 5) **b)** (4*x*2 – 3)

+ (2*x* – 8) + (–8*x*2 – 1)

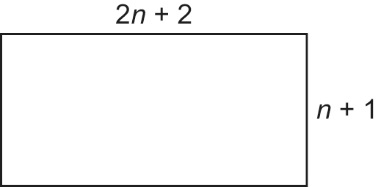
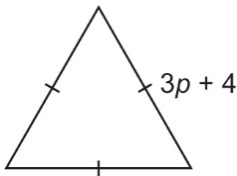
**c)** (*x*2 – 4*x* + 3) **d)** (3*x*2 – 4*x* + 1)

+ (–*x*2 – 2*x* – 3) + (–2*x*2 + 4*x* + 1)

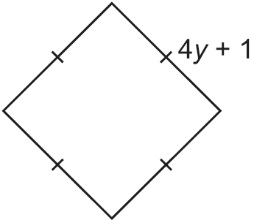
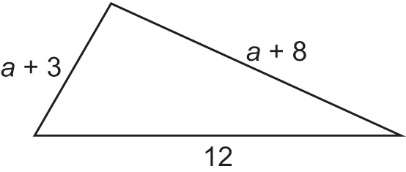
**4.** Add.

**a)** (*y*2 + 6*y* – 5) + (–7*y*2 + 2*y* – 2) **b)** (–2*n +* 2*n*2 + 2) + (–1 –7*n*2 + *n*)

**c)** (3*m*2 + *m*) + (–10*m*2 – *m* – 2) **d)** (–3*d*2 + 2) + (–2 –7*d*2 + *d*)

**5.** For each shape below, write the perimeter as a sum of polynomials and in simplest form.

**a)** **b)**

 **c)** **d)**

**6.** The sum of two polynomials is 4*r* + 5 – 3*r*2. One polynomial is –8 – 2*r*2 + 2*r*; what is the other polynomial? Explain how you found your answer.

5.3 Practice – Answers

**1. a)** 2*h* + 4 **b)** –3*a*2 + 4*a* **c)** 2*y*2 + 4*y* + 8 **d)** –2*y*2 – *y* + 2

**2. a)** 3*x* – 3 **b)** 2*b*2  **c)** –6*y*2 + 8*y* **d)** 2*n*2 + 4

**3. a)** –5*x* – 3 **b)** –4*x*2 – 4 **c)** –6*x* **d)** *x*2 + 2

**4.** **a)** –6*y*2 + 8*y* – 7 **b)** – 5*n*2 –*n* + 1 **c)** –7*m*2 – 2 **d)** –10*d*2 + *d*

**5. a)** 6*n* + 6 **b)** 9*p* + 12 **c)** 16*y* + 4 **d)** 2*a* + 23

**6.** – *r*2 + 2*r* +13