## **Determining Vertex of Polynomials**

No Calculator

- 1. What is the value of y = a(x + 4)(x + 6) at the y-value of the vertex in terms of a?
- 2. What is the value of y = a(x+5)(x-5) at the y-value of the vertex in terms of a?
- 3. What is the value of y = a(x + 2)(x 4) at the y-value of the vertex in terms of a?
- 4. What is the value of y = a(x + 2)(x + 8) at the y-value of the vertex in terms of a?
- 5. What is the value of y = a(x 4)(x + 2) at the y-value of the vertex in terms of a?
- 6. What is the value of y = a(x-3)(x+5) at the y-value of the vertex in terms of a?
- 7. What is the value of y = a(x-7)(x-5) at the y-value of the vertex in terms of a?
- 8. What is the value of y = a(x-2)(x+4) at the y-value of the vertex in terms of a?
- 9. What is the value of y = a(x + 9)(x + 17) at the y-value of the vertex in terms of a?
- 10. What is the value of y = a(x + 9)(x + 3) at the y-value of the vertex in terms of a?
- 11. What is the value of y = a(x 10)(x 12) at the y-value of the vertex in terms of a?
- 12. What is the value of y = a(x-4)(x-12) at the y-value of the vertex in terms of a?
- 13 . What is the value of y = a(x-1)(x+5) at the y-value of the vertex in terms of a?
- 14. What is the value of y = a(x 6)(x 12) at the y-value of the vertex in terms of a?
- 15 . What is the value of y = a(x 6)(x 16) at the y-value of the vertex in terms of a?
- 16. What is the value of y = a(x + 7)(x + 1) at the y-value of the vertex in terms of a?

## **Answers**

- 1. -a
- 2. -25a
- 3. -9a
- 4. -9a
- 5. -9a
- 6. -6a
- 7. -a
- 8. -9a
- 9. -6a
- 10. -9a
- 11. -a
- 12. -6a
- 13. -9a
- 14. -9a
- 15. -25a
- 16. -9a