

Exercises – FOIL Method and Special Products

1

$$(x+3)(x-5)$$

Which of the following is equivalent to the expression shown above?

- A) $(x+1)^2 - 14$
- B) $(x-1)^2 - 12$
- C) $(x-1)^2 - 16$
- D) $(x-2)^2 - 12$

2

$$(2-5x)(5x+2)$$

Which of the following is equivalent to the expression shown above?

- A) $25x^2 - 4$
- B) $-25x^2 + 4$
- C) $25x^2 - 10x + 4$
- D) $-25x^2 + 10x + 4$

3

$$4x^2 - 12xy + 9y^2$$

Which of the following is equivalent to the expression shown above?

- A) $(2x^2 - 3y)^2$
- B) $(2x^2 - 3y^2)^2$
- C) $(2x - 3y^2)^2$
- D) $(2x - 3y)^2$

4

$$(x+y)(x-y)(x^2+y^2)$$

Which of the following is equivalent to the expression shown above?

- A) $x^4 - 2x^2y^2 + y^4$
- B) $x^4 + 2x^2y^2 + y^4$
- C) $x^4 + y^4$
- D) $x^4 - y^4$

5

What is the value of $\frac{3^{(a-b)} \cdot 3^{(a+b)}}{3^{2a+1}}$?

- A) $\frac{1}{3}$
- B) $\frac{1}{9}$
- C) 3
- D) 9

6

What is the value of $\frac{2^{(a-1)(a+1)}}{2^{(a-2)(a+2)}}$?

- A) $\frac{1}{16}$
- B) $\frac{1}{8}$
- C) 8
- D) 16