Chapter 10 Practice Test

1

$$\frac{2^{(a+b)^2}}{2^{(a-b)^2}}$$

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

A) $8^{(a+b)}$

B) 8^{ab}

C) 16^{a+b}

D) 16^{ab}

2

$$2m^2n - mnp - 6m + 3p$$

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

A) $(2m-n)(mp-3)$

B) $(2m-p)(mn-3)$

C) $(2m+p)(mn+3)$

D) $(2m-n)(mn-3p)$

3

$$(\frac{a+b}{2})^2 - (\frac{a-b}{2})^2 =$$

A) ab

B) $-ab$

C) $\frac{2ab+b^2}{2}$

D) $ab+b^2$

4

If $(x+\frac{1}{x})^2 = 9$, then $(x-\frac{1}{x})^2 =$

A) 3

B) 5

C) 7

D) 9

5

If $8^{\frac{4}{3}} \cdot 8^{-\frac{8}{3}} = \frac{1}{2^m}$, what is the value of m?

A) $-\frac{4}{3}$

B) –4

C) $\frac{4}{3}$

D) 4

6

If $xy \neq 0$, then $\frac{(-2xy^2)^3}{4x^4y^5} =$

A) $-\frac{xy}{2}$

B) $-\frac{2}{x}$

C) $-\frac{2y}{x^2}$

D) $-\frac{2y}{x}$

7

If $x^{12} = 32n^4$ and $x^9 = 4n$, then $x =$

A) $2n$

B) $2n^{\frac{1}{2}}$

C) $4n^{\frac{1}{2}}$

D) $4n$

8

$$(3x^3 - 2x^2 - 7) - (-2x^2 + 6x + 2)$$

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

A) $3(x^3 + 2x - 6)$

B) $3(x^3 - 2x - 9)$

C) $3(x^3 + 2x - 3)$

D) $3(x^3 - 2x - 3)$

9

$$9x - (x - 3)(x + 12)$$

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

A) $36 - 18x - x^2$

B) $36 + 12x - x^2$

C) $(6 - x)(6 + x)$

D) $(6 - x)^2$

10

If $\frac{(2.1\times10^{-3})(2\times10^{5})}{7\times10^{-4}} = 6\times10^{n}$, what is the value of n?

11

If $a^{\frac{3}{4}} = 8$, what is the value of $a^{-\frac{1}{2}}$?

12

$$\frac{x^2 - x - a}{x - 2} = x + 1 - \frac{8}{x - 2}$$

In the equation above, what is the value of a?