

**A.APR.A.1: Division of Powers**

1 How many times larger than  $\frac{1}{4}x$  is  $5x$ ?

- 1) 20
- 2) 9
- 3)  $\frac{5}{4}$
- 4)  $\frac{4}{5}$

2 What is half of  $2^6$ ?

- 1)  $1^3$
- 2)  $1^6$
- 3)  $2^3$
- 4)  $2^5$

3 What is one-third of  $3^6$ ?

- 1)  $1^2$
- 2)  $3^2$
- 3)  $3^5$
- 4)  $9^6$

4 The quotient of  $-\frac{15x^8}{5x^2}$ ,  $x \neq 0$ , is

- 1)  $-3x^4$
- 2)  $-10x^4$
- 3)  $-3x^6$
- 4)  $-10x^6$

5 The expression  $\frac{-32x^8}{4x^2}$ ,  $x \neq 0$ , is equivalent to

- 1)  $8x^4$
- 2)  $8x^6$
- 3)  $-8x^4$
- 4)  $-8x^6$

6 When  $-9x^5$  is divided by  $-3x^3$ ,  $x \neq 0$ , the quotient is

- 1)  $-3x^2$
- 2)  $3x^2$
- 3)  $-27x^{15}$
- 4)  $27x^8$

7 Which expression represents  $\frac{(2x^3)(8x^5)}{4x^6}$  in simplest form?

- 1)  $x^2$
- 2)  $x^9$
- 3)  $4x^2$
- 4)  $4x^9$

8 The expression  $\frac{12w^9y^3}{-3w^3y^3}$  is equivalent to

- 1)  $-4w^6$
- 2)  $-4w^3y$
- 3)  $9w^6$
- 4)  $9w^3y$

9 Which expression represents  $\frac{27x^{18}y^5}{9x^6y}$  in simplest

form?

- 1)  $3x^{12}y^4$
- 2)  $3x^3y^5$
- 3)  $18x^{12}y^4$
- 4)  $18x^3y^5$

10 The expression  $\frac{24x^6y^3}{-6x^3y}$  is equivalent to

- 1)  $-4x^2y^3$
- 2)  $-4x^3y^3$
- 3)  $-4x^9y^4$
- 4)  $-4x^3y^2$

11 Which expression represents  $\frac{-14a^2c^8}{7a^3c^2}$  in simplest

form?

- 1)  $-2ac^4$
- 2)  $-2ac^6$
- 3)  $\frac{-2c^4}{a}$
- 4)  $\frac{-2c^6}{a}$

12 The expression  $\frac{5x^6y^2}{x^8y}$  is equivalent to

- 1)  $5x^2y$
- 2)  $\frac{5y}{x^2}$
- 3)  $5x^{14}y^3$
- 4)  $\frac{5y^3}{x^{14}}$

13 The expression  $\frac{4x^2y^3}{2xy^4}$  is equivalent to

- 1)  $\frac{2x}{y}$
- 2)  $\frac{2y}{x}$
- 3)  $2xy$
- 4)  $-2xy$

14 The product of  $\frac{4x^2}{7y^2}$  and  $\frac{21y^3}{20x^4}$ , expressed in simplest form, is

- 1)  $0.6x^2y$
- 2)  $\frac{3y}{5x^2}$
- 3)  $\frac{12x^2y^3}{20x^4y^2}$
- 4)  $\frac{84x^2y^3}{140x^4y^2}$

15 Simplify:  $\frac{27k^5m^8}{(4k^3)(9m^2)}$

**A.APR.A.1: Division of Powers****Answer Section**

1 ANS: 1

$$\frac{5}{\frac{1}{4}} = 20$$

REF: 080213a

2 ANS: 4

$$\frac{2^6}{2^1} = 2^5$$

REF: 060813ia

3 ANS: 3

$$\frac{3^6}{3^1} = 3^5$$

REF: 061219ia

4 ANS: 3

REF: 060005a

5 ANS: 4

REF: 060707a

6 ANS: 2

REF: 080405a

7 ANS: 3

$$\frac{(2x^3)(8x^5)}{4x^6} = \frac{16x^8}{4x^6} = 4x^2$$

REF: fall0703ia

8 ANS: 1

REF: 061103ia

9 ANS: 1

REF: 060903ia

10 ANS: 4

REF: 011503ia

11 ANS: 4

REF: 061018ia

12 ANS: 2

REF: 080526a

13 ANS: 1

REF: 010817a

14 ANS: 2

REF: 081311ia

15 ANS:

$$\frac{3k^2m^6}{4}$$

REF: 010932ia