

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

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

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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