tutorified

8.EE.A.1 Simplify Expressions Involving Division of Exponents

8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions.

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 $-\dfrac{15x^8}{5x^2}$, $x \neq 0$, is

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

5 The expression $\dfrac{-32x^8}{4x^2}$, $x \neq 0$, 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 $\dfrac{(2x^3)(8x^5)}{4x^6}$ in simplest form?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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1 ANS: 1

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

2 ANS: 4

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

3 ANS: 3

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

4 ANS: 3
5 ANS: 4
6 ANS: 2
7 ANS: 3

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

8 ANS: 1
9 ANS: 1
10 ANS: 4
11 ANS: 4
12 ANS: 2
13 ANS: 1
14 ANS: 2
15 ANS:

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