8.EE.A.1: Division of Powers 1b

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

2. What is half of $2^6$?

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

4. The quotient of $\frac{-15x^8}{5x^7}$, $x \neq 0$, is

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

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

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

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

9. Which expression represents $\frac{27x^{18}y^5}{9x^6y^2}$ in simplest form?

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

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

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

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

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

15. Simplify: $\frac{27k^5m^8}{(4k^3)(9m^2)}$
8.EE.A.1: Division of Powers 1b
Answer Section

1  ANS:
   20
   \( \frac{5}{1} = 20 \)
   \( \frac{2}{4} \)
   REF:  080213a

2  ANS:
   \( 2^5 \)
   \( \frac{2^6}{2^1} = 2^5 \)
   REF:  060813ia

3  ANS:
   \( 3^5 \)
   \( \frac{3^6}{3^1} = 3^5 \)
   REF:  061219ia

4  ANS:
   \( -3x^6 \)
   REF:  060005a

5  ANS:
   \( -8x^6 \)
   REF:  060707a

6  ANS:
   \( 3x^2 \)
   REF:  080405a

7  ANS:
   \( 4x^2 \)
   \( \frac{(2x^3)(8x^5)}{4x^6} = \frac{16x^8}{4x^6} = 4x^2 \)
   REF:  fall0703ia

8  ANS:
   \( -4w^6 \)
   REF:  061103ia
9 \text{ANS:} \quad 3x^{12}y^4 \\
\text{REF: 060903ia}

10 \text{ANS:} \quad -4x^3y^2 \\
\text{REF: 011503ia}

11 \text{ANS:} \quad \frac{-2c^6}{a} \\
\text{REF: 061018ia}

12 \text{ANS:} \quad \frac{5y}{x^3} \\
\text{REF: 080526a}

13 \text{ANS:} \quad \frac{2y}{y} \\
\text{REF: 010817a}

14 \text{ANS:} \quad \frac{3y}{5x^2} \\
\text{REF: 081311ia}

15 \text{ANS:} \quad \frac{3k^2m^6}{4} \\
\text{REF: 010932ia}