

Exponents

Name: _____

Date: _____

Evaluate the Exponents.

1) $5a^5b^6 \times 7ab^4 =$ _____

2) $5y^4 \times 25y^8 =$ _____

3) $\left(\frac{1}{z}\right)^{14} \times \left(\frac{1}{z}\right)^{-5} =$ _____

4) $8mn^2 \times 8m^{-5}n^{-2} =$ _____

5) $x^{10}y^{-12} \times 42y^{-4} =$ _____

6) $14mn^{-9} \times 7m^7n^2 =$ _____

7) $\left(\frac{1}{2n}\right)^{-11} \times \left(\frac{1}{2n}\right)^6 =$ _____

8) $2a^8 \times 9a^{-10} \times 9a^7 =$ _____

9) $6m^3n^{-3} \times 9m^{-6}n^6 =$ _____

10) $\left(\frac{7}{49}\right)^{10} \times \left(\frac{7}{49}\right)^{-7} =$ _____

11) $10n^{-11} \times 5n^7 =$ _____

12) $22y^8 \times 3y^{-14} =$ _____

13) $8x^3 \times 4x^8y^4 =$ _____

14) $\left(\frac{16b}{4b}\right)^6 \times \left(\frac{32b}{16b}\right)^4 =$ _____

15) $\left(\frac{7}{21m}\right)^8 \times \left(\frac{7}{21m}\right)^3 =$ _____

16) $15b^9 \times 3b^{-11} =$ _____

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Evaluate the Exponents.

1) $5a^5b^6 \times 7ab^4 = \underline{35a^6b^{10}}$

2) $5y^4 \times 25y^8 = \underline{125y^{12}}$

3) $\left(\frac{1}{z}\right)^{14} \times \left(\frac{1}{z}\right)^{-5} = \underline{\left(\frac{1}{z}\right)^9}$

4) $8mn^2 \times 8m^{-5}n^{-2} = \underline{\frac{64}{m^4}}$

5) $x^{10}y^{-12} \times 42y^{-4} = \underline{\frac{42x^{10}}{y^{16}}}$

6) $14mn^{-9} \times 7m^7n^2 = \underline{\frac{98m^8}{n^7}}$

7) $\left(\frac{1}{2n}\right)^{-11} \times \left(\frac{1}{2n}\right)^6 = \underline{32n^5}$

8) $2a^8 \times 9a^{-10} \times 9a^7 = \underline{162a^5}$

9) $6m^3n^{-3} \times 9m^{-6}n^6 = \underline{\frac{54n^3}{m^3}}$

10) $\left(\frac{7}{49}\right)^{10} \times \left(\frac{7}{49}\right)^{-7} = \underline{\left(\frac{1}{7}\right)^3}$

11) $10n^{-11} \times 5n^7 = \underline{\frac{50}{n^4}}$

12) $22y^8 \times 3y^{-14} = \underline{\frac{66}{y^6}}$

13) $8x^3 \times 4x^8y^4 = \underline{32x^{11}y^4}$

14) $\left(\frac{16b}{4b}\right)^6 \times \left(\frac{32b}{16b}\right)^4 = \underline{2^{16}}$

15) $\left(\frac{7}{21m}\right)^8 \times \left(\frac{7}{21m}\right)^3 = \underline{\left(\frac{1}{3m}\right)^{11}}$

16) $15b^9 \times 3b^{-11} = \underline{\frac{45}{b^2}}$