





Solve each problem using the laws of exponents.

1)  $3^1 = \underline{3} = \underline{3}$

2)  $(2^3)^2 = \underline{2^{3 \times 2}} = \underline{64}$

3)  $(2 \times 3)^2 = \underline{2^2 \times 3^2} = \underline{36}$

4)  $2^2 \times 2^{-4} = \underline{2^{2-4}} = \underline{\frac{1}{4}}$

5)  $(\frac{1}{3})^2 = \underline{\frac{1}{3^2}} = \underline{\frac{1}{9}}$

6)  $3^{-2} = \underline{\frac{1}{3^2}} = \underline{\frac{1}{9}}$

7)  $2^0 = \underline{1} = \underline{1}$

8)  $2^{-4} \times 2^2 = \underline{2^{-4+2}} = \underline{\frac{1}{4}}$

9)  $(\frac{1}{3})^3 = \underline{\frac{1}{3^3}} = \underline{\frac{1}{27}}$

10)  $3^2 \times 3^3 = \underline{3^{2+3}} = \underline{243}$

**Answers**

1.  $\underline{3}$

2.  $\underline{64}$

3.  $\underline{36}$

4.  $\underline{\frac{1}{4}}$

5.  $\underline{\frac{1}{9}}$

6.  $\underline{\frac{1}{9}}$

7.  $\underline{1}$

8.  $\underline{\frac{1}{4}}$

9.  $\underline{\frac{1}{27}}$

10.  $\underline{243}$