



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. 3

2. 64

3. 36

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

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

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

7. 1

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

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

10. 243