

Equivalent Quest Answer Key

Group 1:

- A. 2^{-3}
- B. $\frac{1}{2^3}$
- C. $\frac{1}{8}$
- D. 8^{-1}

Group 2:

- E. 5^{-2}

- F. $\frac{1}{5^2}$

- G. $\frac{1}{25}$

- H. 25^{-1}

Group 3:

- I. x^{-4}

- J. $\frac{1}{x^4}$

- K. $(x^4)^{-1}$

- L. Reciprocal of x^4

Group 4:

- M. 10^{-1}

- N. $\frac{1}{10^1}$

- O. $\frac{1}{10}$

- P. 0.1

Teacher's Guide

- Quick implementation tips
 - Review that a negative exponent represents the reciprocal of the corresponding positive power.
 - Encourage students to identify the negative exponent card first, then find its matching forms.
- Differentiation strategies
 - Give students a completed example group before they begin.
 - Challenge advanced students to explain why each expression in a group is equivalent using exponent rules.
- Engagement ideas
 - Cut the expressions into cards for a hands-on sorting activity.
 - Have student pairs compare groups and justify every match before checking answers.
- Extension activities
 - Ask students to create a new group of four equivalent expressions using a different base or variable.
 - Have students rewrite each group using only positive exponents and explain how each form is connected.