

## Match up on Trickier Exponent Rules



Match each of the expressions in the squares of the grid below with an equivalent simplified expression from the top. If an equivalent expression is not found among the choices A through D, then choose E (none of these).

Example:  $\left(\frac{x}{3}\right)^2 = \frac{x^2}{3^2} = \frac{x^2}{9}$  (E)

- A. 1      B.  $\frac{4}{x^2}$       C.  $9x^2y^3$       D.  $\frac{-9x^4}{y^3}$       E. None of these

|   |   |                               |   |
|---|---|-------------------------------|---|
| $(4x)^{-2}$   | $(4x^{-2})^0$                                   | $4x^{-2}$                     | $4x^0$  |
| $\frac{-(3x^2y)^2}{y^5}$                                      | $\frac{(-3xy)^2}{y^{-1}}$                       | $\frac{3^{-2}y^{-3}}{x^{-4}}$ | $\left(\frac{x}{2}\right)^{-2}$                 |
| $8x^2\left(\frac{x^{-2}}{8}\right)$                           | $(9x^2y^3)^0$                                   | $\left(\frac{x}{2}\right)^2$  | $y^7\left(\frac{y^2}{3x}\right)^{-2}$           |
| $4\left(\frac{1}{x^2}\right)^0$                               | $(2x)^{-2}$                                     | $3(x^2y^2)(3x^2y^2)^{-1}$     | $\frac{(2x^{-1}z^2)^2}{z^4}$                    |
| $\left(-\frac{y}{a^4b^4}\right)\left(\frac{3xab}{y}\right)^4$ | $\left(\frac{100x^{27}y^{35}}{a^4b^5}\right)^0$ | $(2yz)^2(xyz)^{-2}$           | $\frac{-12x^4}{5}\left(\frac{5}{-12x^4}\right)$ |