Why does the new car with the built-in coffee maker make driving easier?

Simplify the expressions. Leave only positive exponents in your answers and fractions in simplest form. Find the answer below and write the letters next to the answer in the box corresponding to the exercise number. Two answers will be used twice, and some answers will not be used at all.

1. \[\left(\frac{4}{3}\right)^3\]

2. \[7a^2(-2a)(4a^5)\]

3. \[\frac{(3ab)(b^2)}{6a^2b^4}\]

4. \[3^{-1} + 2^{-1}\]

5. \[\left(\frac{6}{5}\right)^{-1}\]

6. \[(3a^4)^{-2}\]

7. \[(a^2)^{-3} \cdot a^4\]

8. \[(3a^{-4})^2 (a^3)^{-1}\]

9. \[\frac{4a^5(a^{-1})^3}{(a^{-2})^{-2}}\]

10. \[\left(\frac{3a^{-2}}{a^4}\right)^{-1}\]

11. \[\frac{(a^4)^{-1}}{9a^3}\]

12. \[(a^2b^3c^{-3})(a^3b^7c^5)^2\]

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Daryl Stephens, East Tennessee State University, February, 2000