

Negative and zero exponents

Simplify without a calculator. Write your answer as a fraction in simplest form.

1. 3^{-3}

2. 2^{-5}

3. 5^0

4. $8^0 \cdot 2^{-3}$

5. $3^5 \cdot 3^{-4}$

6. $5^{-7} \cdot 5^9$

7. $(2^2)^{-2}$

8. $(6^{-1})^2$

9. $(2^3)^{-1}$

Simplify.
Write
you
answer
as a
fraction
in
simplest
form.

1. x^{-8}

2. $3x^{-5}$

3. $\frac{7}{x^{-2}}$

4. $\frac{9}{x^{-4}}$

5. $8x^{-7}y^{-8}$

6. $3x^{-3}$

7. $\frac{3x^0}{y^{-3}}$

8. $(4x)^{-2}$

9. $(2x)^{-4}$

10. $(5x)^0 y^{-2}$

11. $\frac{1}{(3x)^{-3}}$

12. $(2x)^{-2} \cdot 3y^5$