

Skill: Simplifying Exponential Expressions**Investigation 5**

Growing, Growing, Growing

Find an equivalent expression.

1. $3^2 \cdot 3^5$

2. $1^3 \cdot 1^4$

3. $5^4 \cdot 5^3$

4. $4.5^8 \cdot 4.5^2$

5. $3^3 \cdot 3 \cdot 3^4$

Replace each \square with =, <, or >.

6. $3^8 \square 3 \cdot 3^7$

7. $49 \square 7^2 \cdot 7^2$

8. $5^3 \cdot 5^4 \square 25^2$

Simplify each expression.

9. $\frac{(-3)^6}{(-3)^8}$

10. $\frac{8^4}{8^0}$

11. $\frac{(-4)^8}{(-4)^4}$

12. $\frac{7^5}{7^3}$

13. $\frac{(-3)^5}{(-3)^8}$