

Comparing and Ordering Powers

Name: _____

Date: _____

Part A: Evaluate and Compare

Calculate the value of each power, then circle the larger number.

1. $2^3 =$ _____ or $3^2 =$ _____

Larger: _____

2. $4^2 =$ _____ or $2^4 =$ _____

Larger: _____

3. $5^2 =$ _____ or $3^3 =$ _____

Larger: _____

4. $10^2 =$ _____ or $2^5 =$ _____

Larger: _____

Part B: Order in Ascending Order (smallest to largest)

Evaluate each power, then write them in order from smallest to largest.

5. $2^3, 3^2, 1^5, 4^2$

_____ < _____ < _____ < _____

6. $5^2, 2^5, 3^3, 10^1$

_____ < _____ < _____ < _____

7. $4^2, 2^4, 1^8, 3^2$

_____ < _____ < _____ < _____

Part C: Order in Descending Order (largest to smallest)

Evaluate each power, then write them in order from largest to smallest.

8. $6^2, 2^6, 4^3, 3^4$

_____ > _____ > _____ > _____

9. $10^2, 5^3, 2^7, 8^2$

_____ > _____ > _____ > _____

Part D: Challenge

Without calculating, use your knowledge of powers to answer these questions.

10. Which is larger: 2^{10} or 10^2 ? Explain your reasoning.

11. Arrange in order from smallest to largest: $7^2, 2^7, 4^4, 8^2$

_____ < _____ < _____ < _____