Simplifying Exponentials

An exponent tells you how many times the base is used as a factor.

Example: Write 3^4 in standard notation.

The exponent is 4, so write the base 4 times.

$3^4 = 3 \times 3 \times 3 \times 3$.

Write the following expressions in standard notation.

1. 2^6 **2.** 5^3 **3.** 4^7

4. 12^2 **5.** 9^1 **6.** 20^5

7. 6^3 **8.** 3^6 **9.** 10^4

Write the following expressions in exponential notation.

1. $6 \times 6 \times 6$ **2.** $3 \times 3 \times 3 \times 3 \times 3 \times 3$ **3.** 10×10

4. $21 \times 21 \times 21 \times 21$ **5.** $1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1$ **6.** $8 \times 8 \times 8 \times 8 \times 8$

7. $5 \times 5 \times 5 \times 5 \times 5 \times 5$ **8.** $2 \times 2 \times 2$ **9.** $4 \times 4 \times 4 \times 4$

Simplifying Exponentials

An exponent tells you how many times the base is used as a factor.

Example: Write 3^4 in standard notation.

The exponent is 4, so write the base 4 times.

$3^4 = 3 \times 3 \times 3 \times 3$.

Simplify- Standard Form

1. **5^2 = _____**
2. **2^3 = _____**
3. **8^3 = _____**
4. **3^3 = _____**
5. **10^5 = _____**
6. **4^3 = _____**
7. **6^3 = _____**
8. **3^2 = _____**
9. **5^3 = _____**
10. 2^2 = _____

Write as an Exponential

11. **6 x 6 x 6 x 6 = _____**
12. **6 x 6 x 6 x 6 = _____**
13. **3 x 3 x 3 x 3 = _____**
14. **3 x 3 x 3 x 3 x 3 = _____**
15. **6 x 6 x 6 = _____**
16. **8 x 8 = _____**
17. **6 x 6 x 6 x 6 x 6 = _____**
18. **2 x 2 = _____**
19. **2 x 2 = _____**
20. 5 x 5 x 5 = _____

Simplifying Exponentials

An exponent tells you how many times the base is used as a factor.

Example: Write 3^4 in standard notation.

The exponent is 4, so write the base 4 times.

$3^4 = 3 \times 3 \times 3 \times 3$.

Simplify- Standard Form

1. 10^3 = _____
2. 2^3 = _____
3. 5^4 = _____
4. 4^5 = _____
5. 2^4 = _____
6. 3^4 = _____
7. 3^4 = _____
8. 2^6 = _____
9. 5^3 = _____
10. 1^8 = _____

Write as an Exponential

11. 3 x 3 x 3 x 3 x 3 = _____
12. 9 x 9 x 9 x 9 = _____
13. 9 x 9 x 9 x 9 = _____
14. 5 x 5 = _____
15. 7 x 7 = _____
16. 6 x 6 x 6 x 6 x 6 = _____
17. 3 x 3 x 3 = _____
18. 2 x 2 = _____
19. 8 x 8 x 8 x 8 = _____
20. 9 x 9 = _____

Simplifying Exponentials

An exponent tells you how many times the base is used as a factor.

Example: Write 3^4 in standard notation.

The exponent is 4, so write the base 4 times.

$3^4 = 3 \times 3 \times 3 \times 3$.

Simplify- Standard Form

1. 11^2 = _____
2. 2^3 = _____
3. 8^2 = _____
4. 4^4 = _____
5. 12^2 = _____
6. 3^5 = _____
7. 10^3 = _____
8. 5^4 = _____
9. 3^4 = _____
10. 10^6 = _____

Write as an Exponential

11. 9 x 9 x 9 x 9 x 9 = _____
12. 7 x 7 x 7 x 7 = _____
13. 2 x 2 x 2 = _____
14. 6 x 6 = _____
15. 7 x 7 x 7 x 7 x 7 = _____
16. 8 x 8 x 8 = _____
17. 5 x 5 x 5 x 5 = _____
18. 7 x 7 x 7 x 7 = _____
19. 2 x 2 x 2 = _____
20. 6 x 6 = _____