

Find the prime factorization of each number.

$63 = \text{-----}$	$16 = \text{-----}$
$18 = \text{-----}$	$24 = \text{-----}$
$40 = \text{-----}$	$36 = \text{-----}$
$27 = \text{-----}$	$8 = \text{-----}$

Find the prime factorization of each number.

$49 = \text{-----}$	$15 = \text{-----}$
$72 = \text{-----}$	$30 = \text{-----}$
$32 = \text{-----}$	$42 = \text{-----}$
$44 = \text{-----}$	$50 = \text{-----}$



Exponents with whole number bases

Grade 6 Exponents Worksheet

Solve the following exponents.

1. $1^7 =$ _____

2. $3^5 =$ _____

3. $5^2 =$ _____

4. $10^6 =$ _____

5. $10^3 =$ _____

6. $10^7 =$ _____

7. $8^4 =$ _____

8. $0^1 =$ _____

9. $7^8 =$ _____

10. $4^8 =$ _____

11. $1^5 =$ _____

12. $4^5 =$ _____



Exponents with whole number bases

Grade 6 Exponents Worksheet

Solve the following exponents.

1. $1^7 = 1$ _____

2. $3^5 = 243$ _____

3. $5^2 = 25$ _____

4. $10^6 = 1,000,000$ _____

5. $10^3 = 1,000$ _____

6. $10^7 = 10,000,000$ _____

7. $8^4 = 4,096$ _____

8. $0^1 = 0$ _____

9. $7^8 = 5,764,801$ _____

10. $4^8 = 65,536$ _____

11. $1^5 = 1$ _____

12. $4^5 = 1,024$ _____

Exponents Worksheet

Write using exponents. For example, $8 \times 8 \times 8$ is written as 8^3 . You don't have to solve.

1 a. $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$

2 a. $64 \times 64 \times 64 \times 64 \times 64 \times 64 \times 64 \times 64 \times 64$

3 a. $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$

4 a. $100 \times 100 \times 100 \times 100 \times 100$

5 a. 1×1

6 a. $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

7 a. $95 \times 95 \times 95$

8 a. 7×7

9 a. $1 \times 1 \times 1 \times 1 \times 1 \times 1$

10 a. $2 \times 2 \times 2 \times 2$

Answer Key

1 a. 9^9

2 a. 64^9

3 a. 4^8

4 a. 100^5

5 a. 1^2

6 a. 2^7

7 a. 95^3

8 a. 7^2

9 a. 1^6

10 a. 2^4

Exponents Worksheet

Write using exponents. For example, $8 \times 8 \times 8$ is written as 8^3 . You don't have to solve.

1 a. $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$

2 a. $64 \times 64 \times 64 \times 64 \times 64 \times 64 \times 64 \times 64 \times 64$

3 a. $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$

4 a. $100 \times 100 \times 100 \times 100 \times 100$

5 a. 1×1

6 a. $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$

7 a. $95 \times 95 \times 95$

8 a. 7×7

9 a. $1 \times 1 \times 1 \times 1 \times 1 \times 1$

10 a. $2 \times 2 \times 2 \times 2$

Answer Key

1 a. 9^9

2 a. 64^9

3 a. 4^8

4 a. 100^5

5 a. 1^2

6 a. 2^7

7 a. 95^3

8 a. 7^2

9 a. 1^6

10 a. 2^4



Exponents with whole number bases

Grade 6 Exponents Worksheet

Solve the following exponents.

1. $2^1 =$ _____

2. $10^3 =$ _____

3. $6^6 =$ _____

4. $1^6 =$ _____

5. $4^7 =$ _____

6. $5^4 =$ _____

7. $3^6 =$ _____

8. $9^3 =$ _____

9. $2^7 =$ _____

10. $3^4 =$ _____

11. $3^5 =$ _____

12. $9^8 =$ _____



Exponents with whole number bases

Grade 6 Exponents Worksheet

Solve the following exponents.

1. $2^1 = 2$ _____

2. $10^3 = 1,000$ _____

3. $6^6 = 46,656$ _____

4. $1^6 = 1$ _____

5. $4^7 = 16,384$ _____

6. $5^4 = 625$ _____

7. $3^6 = 729$ _____

8. $9^3 = 729$ _____

9. $2^7 = 128$ _____

10. $3^4 = 81$ _____

11. $3^5 = 243$ _____

12. $9^8 = 43,046,721$ _____



Exponents with whole number bases

Grade 6 Exponents Worksheet

Solve the following exponents.

1. $4^3 =$ _____

2. $0^3 =$ _____

3. $10^1 =$ _____

4. $10^6 =$ _____

5. $2^1 =$ _____

6. $8^8 =$ _____

7. $7^6 =$ _____

8. $9^4 =$ _____

9. $5^9 =$ _____

10. $0^2 =$ _____

11. $6^2 =$ _____

12. $9^2 =$ _____



Exponents with whole number bases

Grade 6 Exponents Worksheet

Solve the following exponents.

1. $4^3 = 64$ _____

2. $0^3 = 0$ _____

3. $10^1 = 10$ _____

4. $10^6 = 1,000,000$ _____

5. $2^1 = 2$ _____

6. $8^8 = 16,777,216$ _____

7. $7^6 = 117,649$ _____

8. $9^4 = 6,561$ _____

9. $5^9 = 1,953,125$ _____

10. $0^2 = 0$ _____

11. $6^2 = 36$ _____

12. $9^2 = 81$ _____