Powers and exponents

Name _____ Date _____

Write as a power, or as a product.

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Example Write $3 \times 3 \times 3 \times 3$ as a power.

1. Count how many 3s are multiplied together: 4.
2. 3 is the base and 4 is the exponent: 3^4 (say "3 to the power 4").

Answer: 3^4

1. 5^6 as a product = _____

2. $5 \times 5 \times 5 \times 5$ = ☐

3. 4^3 as a product = _____

4. $7 \times 7 \times 7 \times 7 \times 7 \times 7$ = ☐

5. 6^2 as a product = _____

6. 8×8 = ☐

Work out each power.

Example 6^2 = ? 2^3 = ?

1. 6^2 means $6 \times 6 = 36$. (Not 6×2.)
2. 2^3 means $2 \times 2 \times 2 = 8$.

Answer: 36 and 8

7. 5^2 = ☐

8. 3^2 = ☐

9. 4^2 = ☐

10. 3×10^2 = ☐

11. 10,000,000 = 10 to the power ☐

12. 8×10^6 = ☐

Free to share with other families. Not for resale.

Order of operations

Name _____ Date _____

× and ÷ first, then + and −. Brackets first.

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Example $(7 + 5) \div 4 \times 3 = ?$

1. Brackets first: $7 + 5 = 12$.
2. Then ÷ and × from left to right: $12 \div 4 = 3$, then $3 \times 3 = 9$.

Answer: 9

1. $4 + 6 \times 8 =$ ☐
2. $7 \times 3 \div 3 =$ ☐
3. $12 \div 6 + 5 =$ ☐
4. $11 \div (4 + 7) =$ ☐
5. $7 \times (11 - 7) =$ ☐
6. $2 \times (8 - 3) =$ ☐

Brackets, exponents, × and ÷, + and −.

Example $2 + 3^2 \times 2 = ?$

1. Exponents come next after brackets: $3^2 = 9$.
2. Then multiply: $9 \times 2 = 18$. Then add: $2 + 18 = 20$.

Answer: 20

7. $5^2 + 11 =$ ☐
8. $4^3 - 10 \times 3 =$ ☐
9. $11^2 + 5 =$ ☐
10. $8 \times 6^2 =$ ☐
11. $4^3 - 8 \times 3 =$ ☐
12. $8 \times 4^2 =$ ☐

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Answers

Answers are in the same order as the boxes.

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1. $5 \times 5 \times 5 \times 5 \times 5 \times 5$
2. 5^4
3. $4 \times 4 \times 4$
4. 7^6
5. 6×6
6. 8^2
7. 25
8. 9
9. 16
10. 300
11. 7
12. 8,000,000

Page 2 · Order of operations

1. 52
2. 7
3. 7
4. 1
5. 28
6. 10
7. 36
8. 34
9. 126
10. 288
11. 40
12. 128

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