

Numeric Expressions with Exponents

Date _____ Period _____

Write each verbal expression as a numeric expression.

- | | |
|-----------------------------|--------------------------------------|
| 1) two to the fourth power | 2) two cubed |
| 3) six to the seventh power | 4) five raised to the power of three |
| 5) seven to the fifth power | 6) eight to the second power |

Write each repeated multiplication as a power.

- | | |
|---|--|
| 7) $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$ | 8) $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$ |
| 9) $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$ | 10) $6 \times 6 \times 6 \times 6 \times 6$ |
| 11) $6 \times 6 \times 6 \times 6 \times 6 \times 6 \times 6$ | 12) $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$ |

Write each power as a repeated multiplication. Then evaluate.

- | | |
|-----------|-----------|
| 13) 4^2 | 14) 4^3 |
| 15) 3^2 | 16) 5^4 |

Determine if the two expressions are equivalent.

- | | |
|--------------------------------|---|
| 17) $8^2 \times 8^3$ and 8^5 | 18) $6 \times 6 \times 6 \times 6 \times 6^4$ and 6^9 |
| 19) $9^7 \div 9$ and 9^6 | 20) $2 \times 2 \times 2 \times 2$ and 2^4 |

Numeric Expressions with Exponents

Write each verbal expression as a numeric expression.

1) two to the fourth power

2^4

2) two cubed

2^3

3) six to the seventh power

6^7

4) five raised to the power of three

5^3

5) seven to the fifth power

7^5

6) eight to the second power

8^2

Write each repeated multiplication as a power.7) $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$

3^7

8) $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$

9^9

9) $9 \times 9 \times 9 \times 9 \times 9 \times 9 \times 9$

9^7

10) $6 \times 6 \times 6 \times 6 \times 6$

6^5

11) $6 \times 6 \times 6 \times 6 \times 6 \times 6 \times 6$

6^7

12) $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$

3^7

Write each power as a repeated multiplication. Then evaluate.13) 4^2

$4 \times 4 = 16$

14) 4^3

$4 \times 4 \times 4 = 64$

15) 3^2

$3 \times 3 = 9$

16) 5^4

$5 \times 5 \times 5 \times 5 = 625$

Determine if the two expressions are equivalent.17) $8^2 \times 8^3$ and 8^5

Equivalent

18) $6 \times 6 \times 6 \times 6 \times 6^4$ and 6^9

Not equivalent

19) $9^7 \div 9$ and 9^6

Equivalent

20) $2 \times 2 \times 2 \times 2$ and 2^4

Equivalent