

p.15 Exponents + Powers Jan 18/16

1. 5^3 ← exponent

base

5. $3 \times 3 \times 3 \times 3 \times 3$

$= 3^5$

11. 5^2

$= 5 \times 5$

17. $5x^3$ write as repeated mult.

$$= 5(x)(x)(x)$$

19. 3 to the fourth

$$3^4$$

$$3 \times 3 \times 3 \times 3$$

$$3 \times 3 \times 3 \times 3$$

$$= 81$$

34.

$$5^3$$

Standard form

$$= 125$$

$$49 \cdot 7^2 + 3^2$$

$$49 + 9$$

$$= 58$$

57.

$$7^2 + 3^3$$

$$= 49 + 27$$

$$= 76$$

P. 18 The Exponent Rules.

1. $5^3 \times 5^4$

Multiplication Rule

$$= 5^{3+4}$$
$$= 5^7$$

When you multiply exponents to the same base, you need add the exponents

10. $4^5 \div 4^3$

Division Rule

$$= 4^{5-3}$$

$$= 4^2$$

When you divide exponents to the same base, you subtract the exponents

$$12. \quad 9^2 \div 9^2$$

$$= 9^{2-2}$$

$$= 9^0$$

$$= 1$$

Rule of Zero,

anything to the
power of zero
equals one.

18.

$$(2^3)^4$$

Power Rule

multiply the exponents

$$= 2^{12}$$

27.

$$\cancel{5}^3 \times \cancel{5}^x = \cancel{5}^7$$

$$3 + x = 7$$

$$x = 4$$

Homework
Homework.

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Work on Review booklet.