

Name: _____

Section: _____

Powers Worksheet #3

Write the power in expanded form (if possible), then EVALUATE!

1) 4^3

4) 2^7

2) 2^4

5) 19^0

3) 9^2

6) 40^1

7) Label the parts of the power: X^9

a. The x is called the _____.

b. The 9 is called the _____.

c. The whole thing x^9 is called the _____.

Write in exponential form.

8) $8 \cdot 8 \cdot 8 \cdot 8$

10) $b \cdot b \cdot b \cdot b \cdot b$

9) $(-7)(-7)(-7)(-7)(-7)$

11) $4 \cdot 4 \cdot 4 \cdot c \cdot c \cdot c \cdot c$

Simplify. Leave answers as a power with NO negative exponents.

12) e^{-8}

14) a^{-14}

13) y^{-7}

15) $(\text{hello})^0$

Simplify. Leave answers as a power with NO negative exponents.

16) $9^7 \cdot 9^2$

19) $e^{-5} \cdot e^3$

17) $p^{11} \cdot p^4$

20) $w^8 \cdot w^{-2}$

18) $x^{-7} \cdot x^7$

21) $y^5 \cdot y^{99}$

Simplify. Leave answers as a power with NO negative exponents.

22) $\frac{5^8}{5^3}$

24) $\frac{a^9}{a^9}$

23) $\frac{3^3}{3^{11}}$

25) $\frac{w^{300}}{w^{50}}$

Simplify. Leave answers as a power with NO negative exponents.

26) $(3^5)^3$

28) $(x^{-4})^3$

27) $(2^6)^0$

29) $(b^7)^{-1}$

Squares and Square Roots Review

Find the two square roots of each number.

1) 49

2) 121

3) 1

Simplify each expression.

4) $\sqrt{5 + 11}$

5) $\sqrt{25} + \sqrt{9}$

6) $\sqrt{\frac{64}{16}}$

The square roots are between two consecutive integers. Name the integers.

7) $\sqrt{90}$

8) $\sqrt{21}$

9) $\sqrt{116}$

Simplify the square roots.

10) $\sqrt{18}$

11) $\sqrt{250}$

12) $\sqrt{160}$

Use a calculator to find the square roots to the nearest tenth.

13) $\sqrt{74}$

14) $\sqrt{3600}$

15) $\sqrt{190}$

Answer the following questions. SHOW YOUR WORK!

16) A gallon of stain can cover a square deck with an area of 260 square feet. About how long is each side of the deck? Round your answer to the nearest foot.

17) The area of a square field is 200 ft². Ms. Carnes wants to put a fence around the entire field. How much fencing will she need? Round your answer to the nearest foot.