

6th Grade
Feb 22, 2021

Today we will:

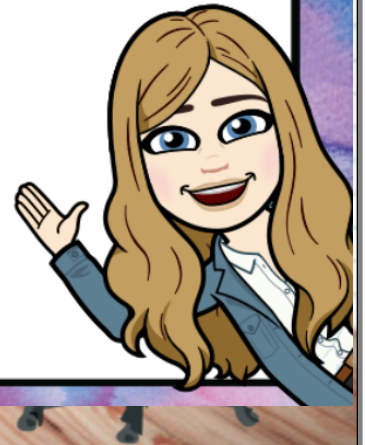
- review HW (6PR)
- video/class notes
- begin HW if time

-Test and binder check
Monday: Barrett

HOMEWORK:

Pg 445 WS

ALEKS assignment: 60
min and 5 topics due
next Monday by 11:59pm



Write each product using an exponent. (Examples 1 and 2)

1. $6 \times 6 = 6^2$

2. $1 \times 1 \times 1 = 1^3$

3. $5 \times 5 \times 5 \times 5 \times 5 = 5^5$

4. $12 \times 12 = 12^2$

5. $27 \times 27 \times 27 = 27^3$

6. $15 \times 15 \times 15 = 15^3$

Write each power as a product of the same factor. Then find the value. (Examples 3-5)

7. $6^4 = 6 \times 6 \times 6 \times 6; 1,296$
 36×36

8. $0.5^3 = 0.5 \times 0.5 \times 0.5; 0.125$
 $0.5 \times 0.5 = 0.25$
 $0.25 \times 0.5 = 0.125$

9. $(\frac{1}{8})^2 = \frac{1}{8} \times \frac{1}{8} = \frac{1}{64}$

10. **Identify Repeated Reasoning** A byte is a basic unit of measurement for information storage involving computers. (Example 6)



a. A kilobyte is equal to 10^3 bytes. Write 10^3 as a product of the same factor. Then find the value.
 $10 \times 10 \times 10; 1,000$

b. A megabyte is equal to 10^6 bytes. Write 10^6 as a product of the same factor. Then find the value.
 $10 \times 10 \times 10 \times 10 \times 10 \times 10; 1,000,000$

$1,000,000,000$
 $- 1,000,000$

c. How many more bytes of information are in a gigabyte than a megabyte? **999,000,000 bytes**

Find the value of each expression.

11. $0.5^4 + 1 = 1.0625$
 $0.125 \times 0.5 = 0.0625$

12. $(3.2)^3 \times 10 = 327.68$
 $3.2 \times 3.2 = 10.24$
 $10.24 \times 3.2 = 32.768$
 $32.768 \times 10 = 327.68$

13. $10.3^2 + 8 = 1100.727$
 $10.3 \times 10.3 = 106.09$
 $106.09 + 8 = 114.09$

H.O.T. Problems Higher Order Thinking

14. **Model with Mathematics** Write a power whose value is greater than 1,000. **Sample answer: 50^2**

Write each product using an exponent.

18. $6 \times 6 \times 6 = 6^3$
 The factor 6 is used 3 times.
 The base is 6.
 The exponent is 3.

19. $10 \times 10 \times 10 = 10^3$

20. $32 \times 32 \times 32 \times 32 = 32^4$

21. $9 \times 9 = 9^2$

22. $7 \times 7 \times 7 \times 7 \times 7 = 7^5$

23. $13 \times 13 \times 13 \times 13 = 13^4$

Write each power as a product of the same factor. Then find the value.

24. $3^7 = 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 = 2,187$

25. $0.06^2 = 0.06 \times 0.06; 0.0036$

26. $(\frac{1}{4})^3 = \frac{1}{4} \times \frac{1}{4} \times \frac{1}{4} = \frac{1}{64}$

27. **Be Precise** The baseball infield at the right has an area of 90^2 square feet. What is the area of the infield?
8,100 square feet 90×90

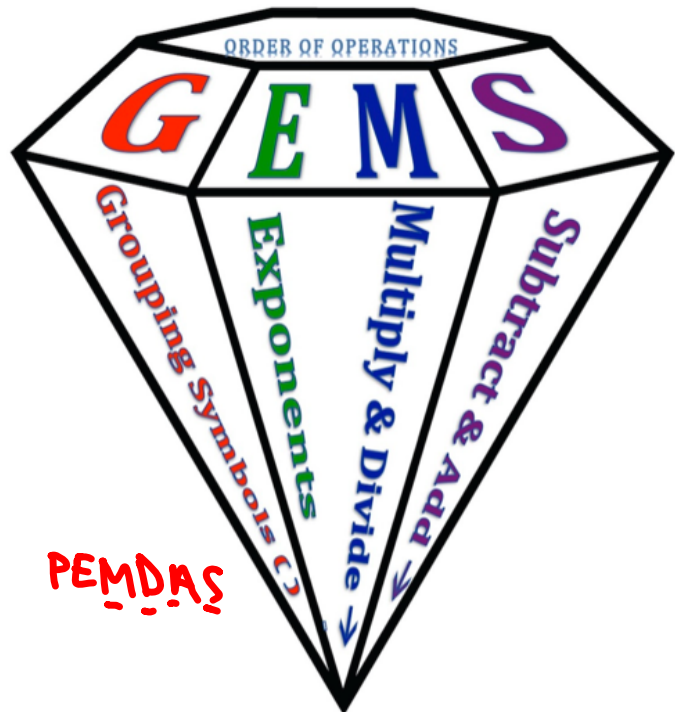


28. Last week Bakery Marvels baked 5^5 muffins. How many muffins did Bakery Marvels bake?
3,125 muffins $5 \times 5 \times 5 \times 5 \times 5 = 125 \times 25 = 3,125$

$5 \times 5 \times 5 \times 5 \times 5 = 125 \times 25 = 3,125$

$3.5 \times 3.5 \times 3.5 = 42.875$

29. Luke ran 3.5^3 miles in the month of January. How many miles did Luke run in January? **42.875 miles**



Order of Operations

G Simplify within Grouping symbols like () { } []

E Simplify exponents

M Perform multiplications and divisions in order from left to right \longrightarrow

S Perform subtractions and additions in order from left to right \longrightarrow

a. $10 + 2 \times 15$

$$\begin{array}{r} 10 + 30 \\ \hline 40 \end{array}$$

b. $16 \div 2 \times 4$

$$\begin{array}{r} 8 \times 4 \\ \hline 32 \end{array}$$

c. $25 \times (5 - 2) \div 5 - 12$

$$\begin{array}{r} 2 \times 3 = 5 - 12 \\ \hline 7 \times 5 = 5 - 12 \end{array}$$

3

29

d. $24 \div (2^3 + 4)$

$$\begin{array}{r} 8 + 4 \\ \hline 24 \div 12 \\ \hline 2 \end{array}$$

e. Alexis and 3 friends are at the mall. Each person buys a pretzel for \$4, sauce for \$1, and a drink for \$2. Write an expression for the total and find the total cost.

$$4(4 + 1 + 2) = 4 \times 7 = 28$$

1. $9 + 3 - 5 =$

$$\begin{array}{r} 12 - 5 = 7 \end{array}$$

2. $(26 + 5) \times 2 - 15 =$

$$\begin{array}{r} 31 \times 2 \\ \hline 62 - 15 \\ \hline 47 \end{array}$$

3. $5^2 + 8 \div 2 =$

$$\begin{array}{r} 25 + 8 \div 2 \\ \hline 25 + 4 \\ \hline 29 \end{array}$$

4. **Financial Literacy** Tickets to a play cost \$10 for members and \$24 for nonmembers. Write an expression to find the total cost of 4 nonmember tickets and 2 member tickets. Then find the total cost. (Example 6)

$$2 \times 10 + 4 \times 24 = \$116$$

$$\begin{array}{r} 10 \quad 24 \quad 96 \\ \hline 2 \times 4 + 20 \\ \hline 20 + 96 = 116 \end{array}$$



Name _____ My Homework _____

Independent Practice

Go online for Step-by-Step Solutions



Find the value of each expression. (Examples 1–5)

1. $8 + 4 - 3 =$ _____

2. $38 - 19 + 12 =$ _____

3. $7 + 9 \times (3 + 8) =$ _____

4. $15 - 2^3 \div 4 =$ _____

5. $55 \div 11 + 7 \times (2 + 14) =$ _____

6. $5^3 - 12 \div 3 =$ _____

7. $8 \times (2^4 - 3) + 8 =$ _____

8. $9 + 4^3 \times (20 - 8) \div 2 + 6 =$ _____

9. **Financial Literacy** Tyree and four friends go to the movies. Each person buys a movie ticket for \$7, a snack for \$5, and a drink for \$2. Write an expression for the total cost of the trip to the movies. Then find the total cost. (Example 6)

10. **Financial Literacy** The Molina family went to a concert together. They purchased 4 concert tickets for \$25 each, 3 T-shirts for \$15 each, and a poster for \$10. Write an expression for the total cost. Then find the total cost. (Example 6)

