

# What Did People Say When Walter Gearloose Tried to Drag His Sheep Across a Frozen Pond?



Write the letter of each correct answer in the box containing the exercise number.

Simplify the expression.

1.  $5^3 \cdot 5^2$

S.  $5^4$

11.  $3^2 \cdot 3^3$

N. -243

21.  $40^8 \div 40^5$

R. 59,049

2.  $(-5)^7 \cdot (-5)^4$

A.  $(-5)^{11}$

12.  $(-3)^2 \cdot (-3)^3$

S. -81

22.  $\frac{(-40)^4}{(-40)^3}$

G. 729

3.  $5^8 \div 5^5$

W.  $5^5$

13.  $87 \div 84$

H. -512

23.  $(-9)^2 \cdot (-9)^2$

E. 6561

4.  $(-5)^{10} \div (-5)^3$

I. 5

14.  $\frac{(-8)^5}{(-8)^3}$

A. -64

24.  $9 \cdot 9 \cdot 9^3$

N. -1600

5.  $\frac{5^6}{5^5}$

L.  $5^3$

15.  $\frac{(-8)^4}{-8}$

T. 64

25.  $\frac{9^2}{9^2}$

V. -40

Simplify the expression.

6.  $x^9 \cdot x^2$

U.  $(-x)^{12}$

16.  $10^3 \cdot 10$

O. 128

26.  $5^7 \cdot 5^n = 5^{10}$

E. 0

7.  $x^9 \div x^2$

L.  $x^8$

17.  $-10 \cdot (-10)^5$

A. -10,000

27.  $(-8)^n \cdot (-8)^4 = (-8)^{15}$

I. 8

8.  $(-x)^6 \cdot (-x)^6$

R.  $(-x)^{30}$

18.  $\frac{(-10)^{12}}{(-10)^7}$

W. 1,000,000

28.  $12^{10} \div 12^n = 12^2$

D. 2

9.  $\frac{x^4}{x}$

P.  $x^7$

19.  $2^2 \cdot 2^3 \cdot 2^2$

E. 10,000

29.  $m \cdot m^n = m^{13}$

C. 12

10.  $x \cdot x^7$

N.  $x^6$

20.  $\frac{(-2)^{11}}{(-2)^4}$

O. -100,000

30.  $\frac{m^4}{m^4} = m^n$

U. 3

Write the expression without exponents.

What value of  $n$  makes the statement true?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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# Why Did the Scientist Create an Exact Duplicate of Himself?

Choose the correct answer for each exercise and circle the letter pair next to it. Write the upper case letter in the box containing the lower case letter.



In Exercises 1-2, choose the number that is written in scientific notation.

1. **h•R**  $12.3 \times 10^4$     **k•T**  $1.23 \times 10^5$     **f•Y**  $0.123 \times 10^6$   
 2. **n•P**  $0.45 \times 10^{-2}$     **b•X**  $4.5 + 10^{-3}$     **u•A**  $4.5 \times 10^{-3}$

In Exercises 3-6, find the value of  $n$ .

3.  $72,000,000 = 7.2 \times 10^n$   
 4.  $33,300,000,000 = 3.33 \times 10^n$   
 5.  $0.00008 = 8 \times 10^n$   
 6.  $0.00000000625 = 6.25 \times 10^n$

- v•K** 6    **f•S** 10  
**q•I** 7    **p•F** 12  
**d•P** -3    **s•K** -8  
**x•U** -5    **m•C** -9

In Exercises 7-12, write the number in decimal form.

7.  $4.9 \times 10^5$   
 8.  $4.9 \times 10^{-5}$   
 9.  $4.90 \times 10^4$   
 10.  $8.75 \times 10^6$   
 11.  $8.75 \times 10^{-2}$   
 12.  $8.75 \times 10^{-7}$

- z•D** 49,000    **w•B** 0.0000049  
**j•V** 4900    **b•E** 490,000  
**o•O** 0.000049    **y•R** 4,900,000  
**a•S** 875    **e•A** 8,750,000  
**t•M** 875,000    **i•U** 0.000000875  
**r•N** 0.0875    **c•F** 0.0000000875

In Exercises 13-18, write the number in scientific notation.

13. 34,000  
 14. 3,400,000,000  
 15. 0.0000034  
 16. 92,200,000  
 17. 0.00922  
 18. 0.0000000922

- k•R**  $3.4 \times 10^{-4}$     **s•G**  $3.4 \times 10^{-6}$   
**q•K**  $3.4 \times 10^{-7}$     **a•H**  $3.4 \times 10^9$   
**w•O**  $3.4 \times 10^4$     **e•B**  $3.4 \times 10^{10}$   
**j•S**  $9.22 \times 10^7$     **n•F**  $9.22 \times 10^8$   
**l•D**  $9.22 \times 10^3$     **g•P**  $9.22 \times 10^{-7}$   
**y•N**  $9.22 \times 10^{-8}$     **d•W**  $9.22 \times 10^{-3}$

In Exercises 19-22, write the number in scientific notation.

19.  $16.6 \times 10^3$   
 20.  $0.166 \times 10^8$   
 21.  $0.55 \times 10^{-4}$   
 22.  $55 \times 10^{-12}$

- o•G**  $1.66 \times 10^5$     **p•N**  $1.66 \times 10^4$   
**h•J**  $1.66 \times 10^7$     **g•Y**  $1.66 \times 10^{10}$   
**n•L**  $5.5 \times 10^{-11}$     **t•S**  $5.5 \times 10^{-6}$   
**l•V**  $5.5 \times 10^{-13}$     **v•R**  $5.5 \times 10^{-5}$

a b c d e f g h i j k l m n o p q r s t u v w x y z