

Name Key Hour \_\_\_\_\_

## How Did the Light Dress Up for the Costume Party?

Write a fraction (or the number 1) for each power. For each set of exercises, there is one extra answer. Write the letter of this answer in the corresponding box below.

*AS a Feather!*

8	3	5	10	4	1	7	9	6	2
A	S	A	F	E	A	T	H	E	R

Answers

Answers

1	V $7^2 \frac{1}{7^2}$ L $2^{-3} \frac{1}{2^3}$ B $3^{-2} \frac{1}{3^2}$	<del>B) <math>\frac{1}{3^2}</math></del> <del>L) <math>\frac{1}{2^3}</math></del>	<del>V) <math>\frac{1}{7^2}</math></del> A) $\frac{1}{2^7}$	6	A $10^{-1} \frac{1}{10}$ U $20^{-2} \frac{1}{20^2}$ O $100^{-3} \frac{1}{100^3}$	<del>U) <math>\frac{1}{20^2}</math></del> E) $\frac{1}{220}$ <del>O) <math>\frac{1}{100^3}</math></del>	<del>A) <math>\frac{1}{10}</math></del> <del>O) <math>\frac{1}{100^3}</math></del>
2	N $10^{-4} \frac{1}{10^4}$ G $4^{-3} \frac{1}{4^3}$ D $9^{-2} \frac{1}{9^2}$	<del>G) <math>\frac{1}{4^3}</math></del> R) $\frac{1}{3^3}$	<del>D) <math>\frac{1}{9^2}</math></del> <del>N) <math>\frac{1}{10^4}</math></del>	7	V $2^{-7} \frac{1}{2^7}$ M $5^{-4} \frac{1}{5^4}$ L $15^0 1$	<del>T) <math>\frac{1}{15}</math></del> M) $\frac{1}{5^4}$	<del>U) <math>\frac{1}{15}</math></del> <del>V) <math>\frac{1}{2^7}</math></del>
3	P $15^{-1} \frac{1}{15}$ C $8^{-3} \frac{1}{8^3}$ J $2^{-5} \frac{1}{2^5}$	<del>S) <math>\frac{1}{3^8}</math></del> P) $\frac{1}{15}$	<del>J) <math>\frac{1}{2^5}</math></del> C) $\frac{1}{8^3}$	8	O $8^{-2} \frac{1}{8^2}$ Y $10^{-5} \frac{1}{10^5}$ I $4^{-4} \frac{1}{4^4}$	<del>D) <math>\frac{1}{4^4}</math></del> <del>Y) <math>\frac{1}{10^5}</math></del>	<del>O) <math>\frac{1}{8^2}</math></del> A) $\frac{1}{4^5}$
4	H $5^{-3} \frac{1}{5^3}$ F $3^{-4} \frac{1}{3^4}$ P $12^{-2} \frac{1}{12^2}$	<del>H) <math>\frac{1}{5^3}</math></del> E) $\frac{1}{4^5}$	<del>P) <math>\frac{1}{12^2}</math></del> F) $\frac{1}{3^4}$	9	E $7^{-3} \frac{1}{7^3}$ T $15^{-2} \frac{1}{15^2}$ L $11^0 1$	<del>E) <math>\frac{1}{7^3}</math></del> <del>T) <math>\frac{1}{15^2}</math></del>	<del>H) <math>\frac{1}{3^7}</math></del> <del>T) <math>\frac{1}{15^2}</math></del>
5	L $6^0 1$ T $1000^{-1} \frac{1}{1000}$ I $9^{-3} \frac{1}{9^3}$	<del>I) <math>\frac{1}{1000}</math></del> <del>I) <math>\frac{1}{9^3}</math></del>	A) $\frac{1}{6}$	10	M $13^{-2} \frac{1}{13^2}$ B $2^{-6} \frac{1}{2^6}$ S $16^{-1} \frac{1}{16}$	<del>B) <math>\frac{1}{2^6}</math></del> F) $\frac{1}{6^2}$	<del>M) <math>\frac{1}{13^2}</math></del> <del>S) <math>\frac{1}{16}</math></del>

Simplify the negative exponents giving your answer as a fraction.

1.  $5^{-3}$

$$\frac{1}{5^3}$$

2.  $3^{-2}$

$$\frac{1}{3^2}$$

3.  $4^{-3}$

$$\frac{1}{4^3}$$

4.  $10^{-2}$

$$\frac{1}{10^2}$$

5.  $6^{-2}$

$$\frac{1}{6^2}$$

6.  $9^{-1}$

$$\frac{1}{9}$$

7.  $a^{-3}$

$$\frac{1}{a^3}$$

8.  $c^{-5}$

$$\frac{1}{c^5}$$

9.  $f^{-11}$

$$\frac{1}{f^{11}}$$

10.  $h^{-1}$

$$\frac{1}{h}$$

11.  $k^{-20}$

$$\frac{1}{k^{20}}$$

12.  $n^{-7}$

$$\frac{1}{n^7}$$

13.  $\frac{1}{a^{-4}}$

$$a^4$$

14.  $\frac{3}{b^{-2}}$

$$3b^2$$

15.  $\frac{n}{m^{-5}}$

$$m^5 n$$
  
or  
 $nm^5$

16.  $\frac{x}{y^{-1}}$

$$xy$$

17.  $\frac{g^4}{h^{-3}}$

$$g^4 h^3$$

18.  $\frac{3^{-5}}{a^{-5}}$

$$\frac{a^5}{3^5}$$

19.  $\frac{4^{-2}}{m^{-4}}$

$$\frac{m^4}{4^2}$$
 or  $\frac{m^4}{16}$

20.  $\frac{y^{-2}}{c}$

$$\frac{1}{cy^2}$$