

# What Has Long Hair And Purple Feet?

Express the number in each statement below in scientific notation. Select your answer from the two choices given. Write the letter of the correct choice in each box at the bottom of the page that contains the statement number.

<b>1</b>	The mean distance from the surface of the earth to the surface of the moon is 376,000 kilometers. (E) $3.76 \times 10^5$ (R) $3.76 \times 10^4$																							
<b>2</b>	The tallest structure in the world is the Warszawa Radio Mast in Plock, Poland, completed in May 1974. It measures 650 meters in height. (S) $6.5 \times 10^2$ (A) $65 \times 10^2$																							
<b>3</b>	The heaviest bell in the world is the Tsar Kolokol, cast in 1733 in Moscow, U.S.S.R. It weighs 196,000 kilograms. (I) $1.96 \times 10^3$ (H) $1.96 \times 10^5$																							
<b>4</b>	One light-year, the distance traveled by light in one year, is 9,460,000,000,000 kilometers. (T) $9.46 \times 10^{10}$ (O) $9.46 \times 10^{12}$																							
<b>5</b>	Sirius A (the Dog Star) is the brightest star visible in the heavens. It has a mass of 46,500,000,000,000,000,000,000,000,000 kilograms. (D) $4.65 \times 10^{30}$ (K) $4.65 \times 10^{31}$																							
<b>6</b>	The nearest star beyond our sun is the very faint <i>Proxima Centauri</i> , which is 40,300,000,000,000 kilometers from the earth. (T) $4.03 \times 10^{13}$ (S) $4.03 \times 10^{11}$																							
<b>7</b>	The smallest known insects are the "hairy-winged" beetles of the Trichopterygidae family. They measure only 0.02 centimeters in length. (B) $2 \times 10^{-3}$ (M) $2 \times 10^{-2}$																							
<b>8</b>	The wavelength of yellow light is 0.000058 centimeters. (A) $5.8 \times 10^{-5}$ (U) $5.8 \times 10^{-4}$																							
<b>9</b>	The wavelength of one type of X-ray is 0.0000000128 centimeters. (N) $1.28 \times 10^{-8}$ (L) $1.28 \times 10^{-10}$																							
<b>10</b>	The smallest identified virus is the potato spindle tuber virus, which has a diameter of less than 0.000002 centimeters. (I) $2 \times 10^{-6}$ (U) $2 \times 10^{-5}$																							
<b>11</b>	One of the least stable atomic particles is the rho prime meson, which has a lifetime of 0.00000000000000000000000016 seconds. (L) $1.6 \times 10^{-24}$ (P) $1.6 \times 10^{-23}$																							
<b>12</b>	The mass of an electron is 0.00000000000000000000000009 grams. (F) $9 \times 10^{-26}$ (W) $9 \times 10^{-28}$																							
8	11	10	4	9	6	3	8	6	7	8	5	1	2	10	6	2	4	12	9	12	10	9	1	!

# FIND A MATCH

Each of the two blocks below is divided into 25 boxes. Boxes in the top block contain numbers in scientific notation. Boxes in the bottom block contain words. Express any of these numbers as a decimal numeral and find this decimal in the bottom block. Write the word from the top box in the bottom box. Work doggedly and you will spell out a hot message.

$8 \times 10^2$ THAT	$8 \times 10^{-4}$ OF	$8 \times 10^{-9}$ BOTH	$8 \times 10^6$ ARE	$8 \times 10^{-12}$ THE
$8 \times 10^{-11}$ MANY	$8 \times 10^{10}$ TO	$8 \times 10^9$ THESE	$4.5 \times 10^{-2}$ VERY	$4.5 \times 10^4$ IS
$4.5 \times 10^{-8}$ GETTING	$4.5 \times 10^{11}$ IT	$4.5 \times 10^{-3}$ SO	$4.5 \times 10^{-6}$ DAYS	$4.5 \times 10^7$ DOG
$4.5 \times 10^5$ HARD	$1.23 \times 10^3$ HOT	$1.23 \times 10^{-1}$ BEEF	$1.23 \times 10^7$ MAKERS	$1.23 \times 10^{-10}$ FINDING
$1.23 \times 10^8$ ENDS	$1.23 \times 10^{-5}$ PRICE	$1.23 \times 10^9$ HIGH	$1.23 \times 10^{-7}$ MEAT	$1.23 \times 10^{-6}$ MAKE

0.000000000008	0.0000123	0.0008	0.123	45,000
0.0000000045	0.0045	1,230,000.000	8,000,000,000	0.00000045
800	0.000000000008	1230	45,000,000	12,300,000
8,000,000	0.000000000123	450,000,000,000	0.045	450,000
80,000,000,000	0.00000123	0.0000000008	123,000,000	0.000000123