## Solution to Numbers Warrant Powerful Observations

(Puzzle by Yannick Yao)

## Answer: DIVERT

These numbers are huge not only in font size but also in their numerical values, and therefore it's a good idea to use math applications such as Wolfram Alpha to check for properties of these numbers. After doing this, it should not take long to realize that each of the numbers is a perfect power:
$4=2^{2}=4^{1}$,
$22876792454961=3^{28}=9^{14}$,
$32064977213018365645815808=22^{19}$,
$11920928955078125=5^{23}$,
$1889568=18^{5}$,
$262144000000000000000000=20^{18}$.

Most of these numbers are between 1 and 26, so one can convert them into letters:
$\left(B^{B}\right.$ or $\left.D^{A}\right), I^{N}, V^{S}, E^{W}, R^{E}, T^{R}$
The numbers can be translated without ambiguity, with the exception of the first one. However, the flavortext tells us to look "under the ANSWER", which eliminates the ambiguity. This leaves us the letters on the bases to extract, which forms the answer, DIVERT.

