

# THE POWER OF ZERO

Starring Zero Clue and Dee Nominator



I CAN'T BELIEVE ALL THE STUFF WE'VE PICKED UP DURING OUR ADVENTURES.

YEAH, JUST LOOK AT ALL THIS JUNK!

WAIT A MINUTE, ZERO. YOU KNOW THE DEAL WITH THESE KINDS OF WISHES. THERE'S ALWAYS A CATCH.

I WISH FOR MAGIC POWERS!

COOL! LET'S SHRINK THE TROPHY WE GOT AT THE INTERSTELLAR OLYMPICS TO  $2^{-5}$  OF ITS ORIGINAL SIZE.

DO NOT INSULT THE ARTIFACT IN YOUR HANDS. YOU HAVE AWOKEN THE GENIE OF THE LAMP, AND NOW I WILL GRANT YOU THREE WISHES.

Do not open- like, ever!

ROUND ROBBER COSTUME

VERY WELL. I GRANT YOU THE POWER TO SHRINK ANYTHING OR ANYONE YOU WANT BY STATING A NUMBER AND A NEGATIVE EXPONENT. TO UNDO EACH SPELL, SIMPLY STATE THE STANDARD FORM OF THE NUMBER.

ZAP!



**WHAT TO DO:** Help Dee find the standard form of each number that Zero says. Note: Any number raised to the power of 0 = 1.

- 1** Zero goes outside and shrinks a police officer to  $3^{-2}$  of his original size.
  - a.** Write  $3^2$  in standard form:
  - b.** Write the reciprocal of your answer to part **a.** That is the standard form of  $3^{-2}$ . When Dee says it out loud, the police officer will return to normal size:
- 2** Next, Zero zaps town hall to  $7^{-3}$  of its original size. Standard form:

**3** Just for fun, Zero shrinks a giraffe at the city zoo to  $6^{-5}$  of its original size. Standard form:

**4** When the city sends the army after Zero, he just shrinks their tanks to  $8^{-4}$  of their original size. Standard form:

**5** Zero shrinks the tallest building in the city to  $10^{-8}$  of its original size! Standard form:

**6** Without looking, Zero zaps the next person he sees—his mother—to  $5^{-4}$  of her original size! Standard form:

**7** Seeing what he has done to his own mother, Zero snaps out of his evil ways. He uses his second wish: To have  $11^0$  of the powers he had before he rubbed the lamp. How many times as much power does Zero have as he had before he rubbed the lamp?

**BONUS** With his final wish, Zero asks that the genie remain in his lamp, unable to grant anyone wishes for at least the next  $\frac{1}{4}$  years. Write that number of years in standard form:

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