What Did Zero Say to Eight?

3

5

7

1

8

4

6

2

For each set of exercises, there is one extra answer. Write the letter of this answer in the corresponding box at the right. (Some answers are rounded.)

| 1 | Write the expression in exponential form. | $\mathbf{P} 5x^3$ | 5 Evaluate for the given values of the variables. | N 1648 |
|----|---|-------------------------------|--|--------------------------------|
| a. | $x \cdot x \cdot x \cdot x \cdot x$ | O x ⁹ | a. $(5w)^2$ for $w = 4$ | P 1 |
| b. | x to the ninth power | $(5x)^3$ | b. $(x + y)^3$ for $x = 10, y = 3$ | S 400 |
| c. | $5 \cdot x \cdot x \cdot x$ | E $5x^5$ | c. $a^2 \cdot b^5$ for $a = 7, b = 2$ | R 1568 |
| d. | $5x \cdot 5x \cdot 5x$ | v x ⁵ | d. $(m - n)^8$ for $m = 6$, $n = 5$ | 2197 |
| 2 | Write the expression in exponential form. | \mathbf{D} n ³ | 6 Evaluate for the given value of the variable. | R $\frac{9}{16}$ |
| a. | n squared | $\mathbf{Y} (7n)^4$ | a. $y^3 - 8$ for $y = 5$ | E 117 |
| b. | n cubed | $1 4n^7$ | b. $\left(\frac{3}{4}\right)^{u}$ for $u = 2$ | $A \frac{1}{8}$ |
| c. | $7 \cdot n \cdot n \cdot n \cdot n$ | 0 n ² | c. q^1 for $q = 17$ | N 17 |
| d. | $7n \cdot 7n \cdot 7n \cdot 7n$ | \mathbf{R} 7 n ⁴ | d. $\left(\frac{1}{2}\right)^n$ for $n = 3$ | $\frac{3}{8}$ |
| 3 | Evaluate the power. | 0 100,000 | T Find the area of the square. | D 12.3 ft ² |
| a. | 11 ² | T 121 | a. b. | R 84.6 cm ² |
| b. | 2^{7} | 10,000 | 5 cm 3.5 ft | C 216 ft ² |
| c | - 34 | 0 81 | | F 196 ft ² |
| d | . 10 ⁵ | A 128 | 9.2 cm 14 ft | $1 25 \text{ cm}^2$ |
| 4 | Evaluate for the given value of the variable. | G 64 | 8 Find the volume of the cube. | 1 728 in. ³ |
| a | 4^e for $e=3$ | E 492 | a. b. | B 1618 in. ³ |
| b | • p^2 for $p = 15$ | L 512 | 4 in. 2.5 m | D 64 in. ³ |
| c | • 5^x for $x = 4$ | P 225 | c. d. | M 1000 m ³ |
| d | . d^3 for $d = 8$ | C 625 | 12 in. 10 m | S 15.6 m ³ |

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