## The Fantastic Formula

1. Determine, by any convenient method, the value of each of the twenty-five variables below.
2. Substitute the value for each variable into the right-hand side of the equation and perform all indicated arithmetic operations. Use the correct order of operations!

$$
Z=\frac{\sqrt{\frac{f s}{\left(\frac{j}{p+m}\right)}+(a-g)(r-l)+i \bullet o+w}}{t-\frac{y}{\left(\frac{n}{q}\right)}-\left(h-\frac{d-e}{f}+\frac{k-c}{u-v-x-x-t}-(x-b)^{i}\right)}
$$

$\mathrm{a}=$ normal body temperature in Celsius
$b=$ the length of a side of a cube whose volume is $125 \mathrm{~cm}^{3}$
$\mathrm{c}=$ the value of 1 F (base sixteen) in base ten
$d=$ the base ten value of 5736 in base eight
$\mathrm{e}=$ the number of piano keys
$\mathrm{f}=$ the senses + the Great Lakes
$\mathrm{g}=$ (books in a trilogy) x (points in the Star of David)
$h=$ fourscore $x$ starting members of a basketball team
$\mathrm{i}=$ degrees in a circle $\div$ degrees in a right angle
$\mathrm{j}=$ Snow White's dwarfs + $\qquad$ Days in May (book title)
$\mathrm{k}=$ floor left out in most hotels x $\qquad$ seas
l = alphabet's letters x dots in a colon
$\mathrm{m}=$ "A stitch in time saves $\qquad$ "
$\mathrm{n}=$ freezing point of water (in Fahrenheit)
$\mathrm{o}=$ notes in an octave + known planets (including Pluto)
$\mathrm{p}=$ musketeers x baker's dozen
$\mathrm{q}=$ books of the Bible - golden anniversary
$r=$ blackbirds baked in a pie + golf course holes + two decades
$\mathrm{s}=$ bits in a half dollar x days in a week
$\mathrm{t}=$ field goal - safety $($ in football $)$
$\mathbf{u}=$ human adult's teeth + lucky number + original colonies + Wilson's points
$\mathrm{v}=$ Gospels + the Commandments + The Disciples
$\mathrm{w}=$ the R's + legs of a bovine
$\mathrm{x}=$ wisdom teeth x each state's senators to the U.S. Congress
$y=$ checkerboard squares - Presidents on Mount Rushmore

Answers:
$\mathrm{a}=37$
$\mathrm{b}=5$
$\mathrm{c}=31$
$\mathrm{d}=3038$
$\mathrm{e}=88$
$\mathrm{f}=10$
$\mathrm{g}=18$
$\mathrm{h}=400$
$\mathrm{i}=4$
$\mathrm{j}=14$
$\mathrm{k}=91$
$1=52$
$\mathrm{m}=9$
$\mathrm{n}=32$
$\mathrm{o}=17$
$\mathrm{p}=39$
$\mathrm{q}=16$
$\mathrm{r}=62$
$\mathrm{s}=28$
$\mathrm{t}=1$
$\mathrm{u}=66$
$\mathrm{v}=26$
$\mathrm{w}=7$
$\mathrm{x}=8$
$y=60$
$\mathrm{z}=7$

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