

THE "FOUR FOURS" PROBLEM

$$\begin{array}{ll}
 (4 \ 4) \ (4 \ 4) = 0 & (44 \ 4) \ 4 = 10 \\
 (4 \ 4) \ (4 \ 4) = 1 & 44 \ (\sqrt{4} \ \sqrt{4}) = 11 \\
 (4 \ 4) \ (4 \ 4) = 2 & 4 \ (4 \ (4 \ 4)) = 12 \\
 4 \ (4^4 \ 4) = 3 & (44 \ 4) \ \sqrt{4} = 13 \\
 4 \ ((4 \ 4) \ 4) = 4 & 4 \ 4 \ 4 \ \sqrt{4} = 14 \\
 4 \ (4^4 \ 4) = 5 & (44 \ 4) \ 4 = 15 \\
 4 \ ((4 \ 4) \ 4) = 6 & (4^4 \ 4) \ 4 = 16 \\
 (4 \ 4) \ (4 \ 4) = 7 & (4 \ 4) \ (4 \ 4) = 17 \\
 (4 \ 4) \ (4 \ 4) = 8 & (4 \ 4) \ 4 \ \sqrt{4} = 18 \\
 (4 \ 4) \ (4 \ 4) = 9 & 4! \ 4 \ (4 \ 4) = 19 \\
 (4 \ 4) \ \sqrt{4} \ \sqrt{4} = 20
 \end{array}$$