

A Crafty Problem

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Chapter 1; The Pattern Games

The first thing I noticed about this problem is that I would need to find a pattern, or something concerning a pattern. So, I made a small note to myself: if $\frac{1}{3}$ beads are blue, $\frac{2}{6}$ beads are blue, $\frac{3}{9}$ beads are blue, well then, surely the blue beads must be a third of the total amount of beads!

Chapter 2; Lord of the Complications

So what's one third of 160? 160 divided by 3 is 53.33333333(etc.). But how can you have .3 of a bead? Impossible! The blue probably falls in the middle of the pattern. Say, you are at 3×9 , which means each bead is in the pattern 9 times, but you reach 160 before the blue totals nine beads. That means you finish the amount of beads, before the pattern finishes.

Chapter 3; His Numerous Sequences

This means I must find out where the sequence stops. So, I begin this equation:

$1 \times 3 + 2 \times 3 + 3 \times 3 + 4 \times 3 + 5 \times 3 \dots n \times 3 = 160$. I have to find out, which number (multiplied by 3) comes closest to 160 without going over. After many trial and error experiments, the results came in, displaying that 9, is the number.

$1 \times 3 + 2 \times 3 + 4 \times 3 + 5 \times 3 + 6 \times 3 + 7 \times 3 + 8 \times 3 + 9 \times 3 = 135$.

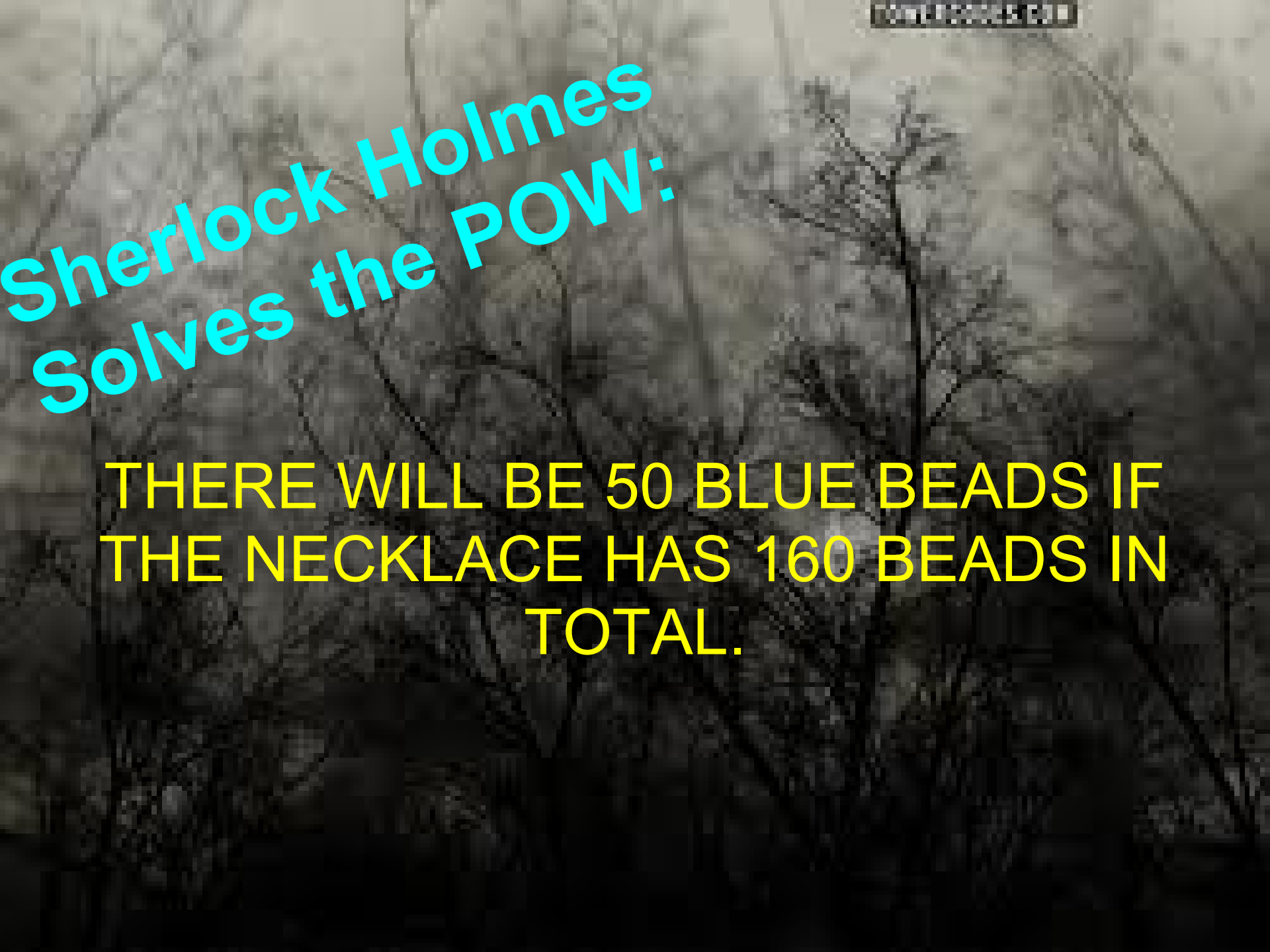
This means I must start at 135, and continue the pattern, with each bead in the pattern 10 times.

Chapter 4; '135' and the Beads

$135 + (\text{red})10 = 145$. 145, doesn't reach 160.
 $145 + (\text{green})10 = 155$. 155 still doesn't reach 160. Now I must add ten to 155, to get the blue pattern. Aha! The blue does cut the pattern. From 155 to 160, only 5 beads are needed to reach the goal number of beads, but 10 are needed to finish the blue bead pattern.

Chapter 5; Problem Wars

What to do? Well, this is what I did. I added 5 blues to 155. But that creates an unbalanced equation, so I must take the remaining 5 and keep it stored in a safe place for the time being. I took 135, divided it by 3, took out the 5, and added it to the quotient. $135/3+5= 50$.



Sherlock Holmes Solves the POW:

THERE WILL BE 50 BLUE BEADS IF
THE NECKLACE HAS 160 BEADS IN
TOTAL.

Gathering Strategies:

1. Find Pattern
2. Make Number Sentence
3. Trial and Error
4. Logic

Chapter Titles

1. The Hunger Games
2. Lord of the Rings
3. His Dark Materials (Golden Compass Trilogy)
4. Percy Jackson and the Olympians
5. Star Wars

Answer. Sherlock Holmes

Strategies. Gathering Blue (2nd book to 'The Giver')

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