

Tower of Hanoi Worksheet

<u>QUESTIONS:</u>	<u>THOUGHT PROCESS:</u>
<ol style="list-style-type: none"><li data-bbox="207 472 933 577">1. Start with 3 discs on the leftmost pole. Explain, with the help of diagrams, how you move all the 3 discs from the leftmost pole to the rightmost pole.<li data-bbox="207 945 933 1050">2. Start with 4 discs on the leftmost pole. Explain, with the help of diagrams, how you move all the 4 discs from the leftmost pole to the rightmost pole.<li data-bbox="207 1375 950 1449">3. Start with 5 discs on the leftmost pole. Which pole should you move the first disc to? _____	

4. Start with 6 discs on the leftmost pole. Which pole should you move the first disc to? _____

Complete the table below.

No. of Discs, n	3	4	5	6	7
Minimum No. of Moves	7	15	31		

5. Is there any pattern in the minimum number of moves required? State the general formula for the minimum number of moves in terms of the number of discs n .
6. What is the purpose of letting you play with the Tower of Hanoi? How is it relevant to mathematics and learning?
7. What are some strategies you can use to justify your reasoning and conjectures in regards to patterns?