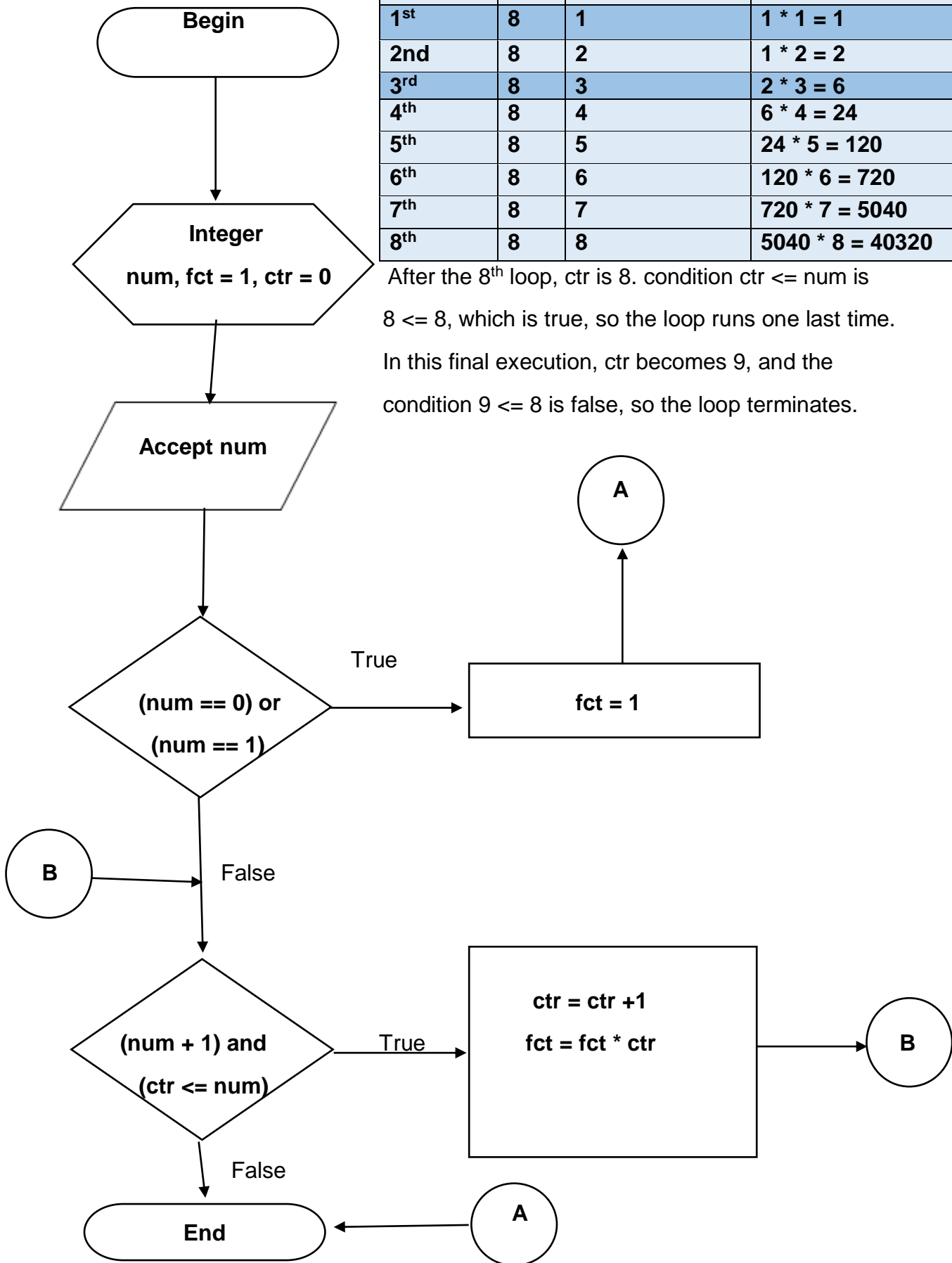


nth loop	num	ctr	fct
		0	1
1 st	8	1	$1 * 1 = 1$
2 nd	8	2	$1 * 2 = 2$
3 rd	8	3	$2 * 3 = 6$
4 th	8	4	$6 * 4 = 24$
5 th	8	5	$24 * 5 = 120$
6 th	8	6	$120 * 6 = 720$
7 th	8	7	$720 * 7 = 5040$
8 th	8	8	$5040 * 8 = 40320$

After the 8th loop, ctr is 8. condition $ctr \leq num$ is $8 \leq 8$, which is true, so the loop runs one last time. In this final execution, ctr becomes 9, and the condition $9 \leq 8$ is false, so the loop terminates.



1. What is value of fct at the 8th loop?

- The value of fct at the 8th loop is 40,320 (which is 8!).

2. When will the process stop?

- The process stop when ctr becomes greater than num. The num = 8, the loop terminates when ctr becomes 9.

3. What is the final value of fct?

- The final value of fct is the value it holds just before the loops terminates. This is the value of 8!, which is 40,320.

4. What is the final value of ctr?

- The final of ctr is the value that makes the loop condition (ctr <= num) false, which is 9.

5. What is the value of ctr in the 3rd loop?

- The value of ctr in the 3rd loop is 3.

6. What is the value of fct in the 4th loop?

- The value fct in the 4th loop is 24 (4!).