

11-1a

19 Process Problem

Tom and Huck are fishing at Catfish Creek. Each time they turn the reel 2 turns they lower their bait 3 m. A school of catfish is swimming 18 m below the surface of the water. How many times must they turn the reel to reach the catfish? (Hint: Complete the table.)

<i>Turns of the reel</i>	2	4	6			
<i>Meters into the water</i>	3	6				

TEACHING ACTIONS

1. Read the problem.
2. Ask questions for understanding the problem.
3. Discuss possible solution strategies.

BEFORE

Understanding the Problem

- What are the boys doing? (fishing)
- How do the boys get their bait down into the water? (They turn the handle of the reel.)
- How many times must the boys turn the handle of the reel to lower the bait 3 m? (2)

TEACHING ACTIONS

4. Observe students.
5. Give hints as needed for solving the problem.
6. Require students to check back and answer the problem.
7. Give problem extension as needed.

DURING

Planning a Solution

- If 2 turns will lower the bait 3 m, how far will the bait be lowered after 2 more turns? (6 m) After 6 turns? (9 m) After 8 turns? (12 m)
- Suppose the bait was lowered 3 m. How many times did the boys turn the handle of the reel? (2) 6 m? (4) 9 m? (6)

TEACHING ACTIONS

8. Discuss solution(s).
9. Discuss related problems and extension.
10. Discuss special features as needed.

AFTER

Finding the Answer

Make a Table

<i>Turns of the reel</i>	2	4	6	8	10	12
<i>Meters into the water</i>	3	6	9	12	15	18

Tom and Huck must turn the handle of the fishing reel 12 times to reach the catfish.

Problem Extension

Suppose the boys went deep-sea fishing. For every 3 turns of the reel, their bait was lowered 5 m. How many turns of the reel must they make to hook a red snapper swimming 30 m below the water's surface? (18)