Knowledge Type 5:

```
[+/-] E1 [instance_of: A1,
          rel11: X11, ..., rel1i1: X1i1]
followed by
...
[+/-] En [instance_of: An,
          reln1: Xn1, ..., relnin: Xnin]
prevents
[+] En+1 [instance_of: An+1,
          rel(n+1)1: Y(n+1)1, ..., rel(n+1)j: Y(n+1)j]
implies
X = Y
```

where, $X \in \bigcup_{a=1}^{n} \bigcup_{k=1}^{i_a} \{X_{ak}\}$, and $Y \in \bigcup_{l=1}^{j} \{X_{(n+1)l}\}$

The symbol `[+/-]` in front of an event E means that E may execute or it is in-executable. In other words, the instances of the knowledge category shown by the representation above includes all the combinations of executable and in-executable versions of the events E_1 to E_n. Similarly, `[+]` in front of an event E means that E is executed and `[-]` in front of an event E means that E is in-executable (or not executed). To make the representation simpler, if an event is executable we may not add a `[+]` symbol in front of it i.e. writing `[+] E` is same as writing `E`.

Intuitively, a statement of the above category means that, if the execution of a sequent of events (E_{seq} = E_1 ... E_n) prevents an event (E_{n+1}) from executing then an entity that participates in an event in E_{seq} also participates in E_{n+1}.

Examples:

1. I was trying to open the lock with the key, but someone had filled the keyhole with chewing gum, and I couldn't get it out. What couldn't I get out?
   Correct Answer: the chewing gum.
   Required Knowledge Instance:
   E1 [instance_of: fill, co-theme: X [instance_of: entity]]
   prevents
   E2 [instance_of: get out, theme: Y [instance_of: entity]]
   implies
   X=Y

2. I was trying to open the lock with the key, but someone had filled the keyhole with chewing gum, and I couldn't get it in. What couldn't I get in?
   Correct Answer: The key.
   Required Knowledge Instance:
   E1 [instance_of: fill, recipient: X [instance_of: entity]]
   followed by

E1 [instance_of: trying to put in, recipient: X [instance_of: entity], destination: X [instance_of: entity]]
prevents
E2 [instance_of: get in, theme: Y [instance_of: entity]]
implies
X=Y

3. Beth didn't get angry with Sally, who had cut her off, because she stopped and apologized. Who apologized?
   Correct Answer: Sally
   Required Knowledge Instance:
   E1 [instance_of: apologize, agent: X [instance_of: entity]]
   prevents
   E2 [instance_of: get angry, destination: Y [instance_of: entity]]
   implies
   X=Y

4. In the middle of the outdoor concert, the rain started falling, but it continued until 10. What continued until 10?
   Correct Answer: the concert.
   Required Knowledge Instance:
   E1 [instance_of: started, location: X [instance_of: entity]]
   prevents
   E2 [instance_of: continue, theme: Y [instance_of: entity]]
   implies
   X=Y

5. Beth didn't get angry with Sally, who had cut her off, because she stopped and counted to ten. Who counted to ten?
   Correct Answer: Beth
   Required Knowledge Instance:
   E1 [instance_of: counted to ten, agent: X [instance_of: person]]
   prevents
   E2 [instance_of: get angry, agent: Y [instance_of: person]]
   implies
   X=Y

6. Tom gave Ralph a lift to school so he wouldn't have to walk. Who wouldn't have to walk?
   Correct Answer: Ralph
   Required Knowledge Instance:
   E1 [instance_of: give a lift, recipient: X [instance_of: person]]
   prevents
   E2 [instance_of: walk, agent: Y [instance_of: person]]
   implies
   X=Y

7. Tom gave Ralph a lift to school so he wouldn't have to drive alone. Who wouldn't have to drive alone?
   Correct Answer: Tom
   Required Knowledge Instance:

E1 [instance_of: give a lift, agent: X [instance_of: person]]
prevents
E2 [instance_of: drive alone, agent: Y [instance_of: person]]
implies
X=Y

8. The path to the lake was blocked, so we couldn't use it. What was not used?
   Correct Answer: the path.
   Required Knowledge Instance:
   E [instance_of: block, recipient: X [instance_of: entity]]
   prevents
   E [instance_of: use, asset: Y [instance_of: entity]]
   implies
   X=Y