

Exercise: Schedule Compression

Why Schedule Compression Matters

Projects slip. When the finish date no longer meets what the customer needs, the project manager does not get to simply report the problem — the Prep book puts it plainly: it is the project manager's responsibility to present options and to make sure the project is achievable. Schedule compression is how you build those options.

There are only two techniques, and they cost you different things. **Crashing** adds resources to shorten activities, which adds cost. **Fast-tracking** overlaps activities that were planned in sequence, which adds risk. Schedule compression is generally applied to critical path activities because shortening noncritical activities normally does not shorten the project. This exercise is about the first one: given a set of activities you could crash, which combination buys the time you need for the least money?

Here is another chance to test yourself on schedule compression. In the table below, Time Savings is how many months an activity gives back if you crash it, and Extra Cost is what that costs. Use those two columns to answer the questions that follow.

Activity	Original Duration (Months)	Crash Duration (Months)	Time Savings (Months)	Original Cost (Dollars)	Crash Cost (Dollars)	Extra Cost (Dollars)	Cost per Month
J	14	12	2	\$10,000	\$14,000	\$4,000	\$2,000
K	9	8	1	\$17,000	\$27,000	\$10,000	\$10,000
N	3	2	1	\$25,000	\$26,000	\$1,000	\$1,000
L	7	5	2	\$14,000	\$20,000	\$6,000	\$3,000
M	11	8	3	\$27,000	\$36,000	\$9,000	\$3,000

1. Imagine that this project has a project float of –3 months (in other words, negative float: the current schedule finishes three months after the completion date the customer requires). Which activity or activities presented above would you crash to save three months on the project, assuming that the activities listed above represent critical path activities?
2. How much would it cost to crash this project?

Answer

1. The following activities could be crashed to save three months on the project:

Activities	Cost
J and K	\$14,000
J and N	\$5,000
K and L	\$16,000
L and N	\$7,000
M	\$9,000

Crashing J and N is the least expensive option at \$5,000, and nothing in the question rules it out, so it is the best answer.

The rule the exam expects you to apply: crash only critical path activities, then choose the combination with the lowest cost for the time you actually need — while checking that crashing does not shift the critical path somewhere else or exceed your resource limits.

Negative float indicates the current schedule cannot meet the required date; schedule compression or other approved changes can subsequently bring it back into alignment. The answer is never to tell the customer the date cannot be met; the Prep book is explicit that the first move is to analyze compression options. Only after that do you consider reducing scope or escalating through governance to renegotiate the deadline — and submit a change request if a baseline has to move.

2. Crashing J and N adds only \$5,000 — the least of any combination that saves three months.

Notice that the **Cost per Month** column is a distractor. You can answer this question using only Activity, Time Savings, and Extra Cost. Do not assume you need every piece of data a question hands you.

That said, cost per month is a useful cross-check here: N at \$1,000 per month and J at \$2,000 per month are the two cheapest, and together they deliver exactly the three months required. The shortcut only works when the combination also adds up to the time you need, so confirm the total before you commit to an answer.

How This Shows Up on the Exam

Compression questions rarely say “crash the project.” They describe a squeeze — a date moved up, a deadline missed, a sponsor asking for options — and the wording tells you which technique is wanted. The Prep book maps this directly in Table 6.5: if budget is tight, think fast-tracking, because overlap buys time without direct cost. If overlap is not possible because the logic is fixed, crashing is the only lever left. If

resources are overallocated, that is a feasibility problem — smooth first.

Three habits are worth carrying in. Do not assume crashing is the answer just because a project is late; analyze the critical path and compare both techniques first. Watch for extra data that looks essential and is not, as the Cost per Month column is here. And remember that compression itself is not the end of the process — if a baseline has to move, a change request goes through integrated change control.