

Z1. It takes 10 painters 2 years to paint a steel bridge from one end to the other. The paint that is used lasts about 2 years, so when the painters have finished painting at one end of the bridge, they go back to the other end and start painting again.

a. Why **MUST** steel bridges be painted?

b. A new paint that lasts 4 years has been developed and costs the same as the old paint. Describe 2 consequences of using the new paint.

Z-1b Coding Guide

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B: Codes paint lasting 4 years.

Note: Each of the two consequences must be coded separately. The same code can be used twice.

However, if the consequences described are essentially the same, the second should be coded as 79.

*Example: They don't need to go back and start again (code 11).
They can wait before they start painting again (code 79).*

Note: Correct responses should be plausible in the national context.

Code	Response
Correct Response	
10	Student includes the fact that there is more profit [for the painting company or the community]. <i>Examples: It is cheaper for the company Less painters are needed. They can paint more bridges.</i>
11	The painters don't need to paint so often or work so hard. <i>Examples: They can wait two years before starting again. Longer vacations for the workers. They can have another job in the meantime.</i>
12	Mentions increased unemployment or lower salary for the workers.
19	Other correct. <i>Example: Fewer problems for the traffic.</i>
Incorrect Response	
70	The paint will last for a longer time.
76	Merely repeats information in the stem. <i>Examples: It will last for four years. It will cost the same</i>
79	Other incorrect.
Nonresponse	
90	Crossed out/erased, illegible, or impossible to interpret.
99	BLANK