









You are writing a program to build a simple tower. Which missing instruction belongs between REP and DO?

	<table border="1" style="border-collapse: collapse; width: 100%;"> <tr> <td style="width: 30%;">WHILE</td> <td style="width: 30%;">10</td> <td style="width: 40%;"></td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>REP</td> <td> </td> <td>END</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> <p style="text-align: right;">Circle the correct instruction</p>	WHILE	10					REP		END						
WHILE	10															
REP		END														
																




Describe the structure built by this program.







Explain in your own words the meaning of the following fragment from the above program. What does this accomplish?



The following program builds a bridge. Identify the missing instruction between ELSE and END.




WHILE	TRUE	DO		
	IF		THEN	
				
	ELSE			
				
	END			
END				





	10
REP	
	

Circle the correct answer

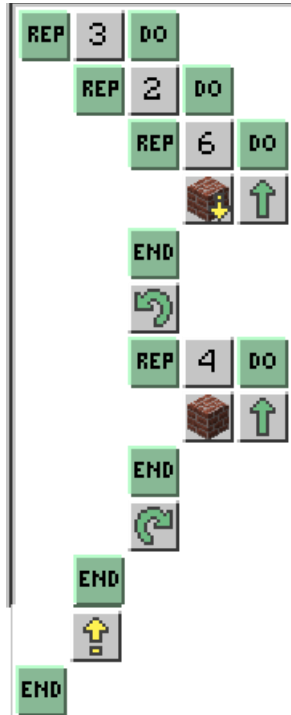
What condition or conditions will cause the robot turtle to stop running the above bridge-building program?

Another programmer wrote the bridge-building program using a different Boolean expression. Draw a line to connect the two missing instructions to the program:

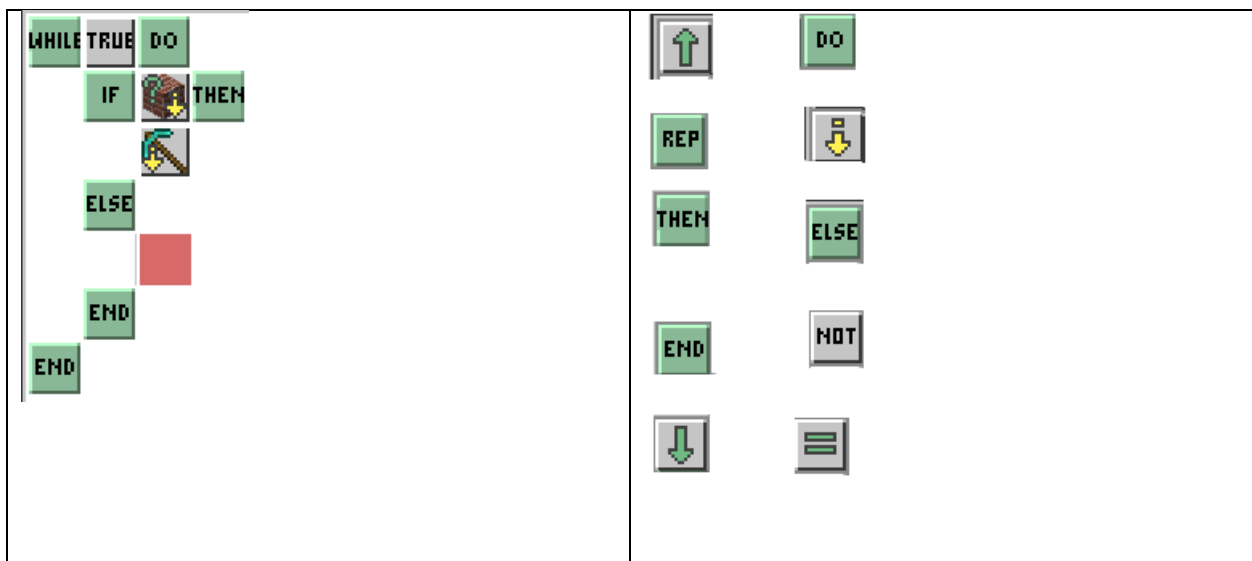
WHILE	TRUE	DO		
	IF	NOT		THEN
				
	ELSE			
				
	END			
END				

	10
REP	
	

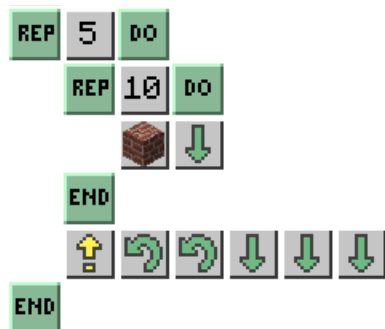
A student wrote a program to build a roofless rectangular room with four walls. The room is supposed to be 6 blocks wide by 4 blocks deep by 3 blocks high. The robot has sufficient materials and there are no pre-existing obstructions, but there are two bugs or mistakes in the program. Identify the bugs and explain what needs to change to correct them.



This program digs a very deep hole straight down, forever. Which programming block belongs in the missing spot?



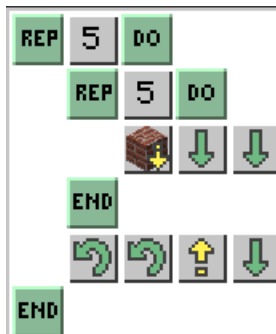
Describe the structure built by the following program:













How would the structure built by the following program differ from the previous problem's program:



Describe the structure built by the following program:



Following is a very simple “search and destroy” program for the robot turtle Battle Royale challenge. Match the missing programming blocks to the red spaces in the following program:

<pre> WHILE TRUE IF [red] THEN IF [red] [red] THEN [red] ELSE [red] END ELSE [red] END END </pre>	<div>   </div> <div>   </div> <div>   </div> <div>   </div> <div>   </div> <p>Draw lines to match the correct block from the above list to the missing spots in the program to the left</p>
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Here is another program for the Battle Royale challenge. It is supposed to seek out, identify, and mine (destroy) other robot turtles. What important behavior is missing from this program?

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WHILE TRUE DO
  IF [red] THEN
    IF [red] = [red] THEN
      [red]
    ELSE
      [red]
    END
  END
END
END

```

This program has some redundant or unnecessary programming blocks in it. How would you re-write it to be clearer and less likely to cause future editing mistakes.

