**HW Submission requirements:**

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## **Problem 1 (10 points) -True/False** Submit a document called: Answers.doc

Answer the following true/false questions. You must correctly state **WHY** your answer is true or false in order to receive credit.

```
#include <stdio.h>
#include <string.h>

int main (int argc, char **argv)
{
	int travel_points=1;
	int check=0;

	char answer[20];

	while(!check)
	{
		printf("Enter state, national or international:\n");
		scanf("%s", answer);

		if(!strcmp(answer, "state"))
		{

			travel_points=travel_points+5;
			printf("Adding 5 points. New total: %d\n", travel_points);

		}

		else if (!strcmp(answer, "national"))
		{
```

```
                travel_points=(travel_points+5)*2;
                printf("Getting state points plus double points! New total: %d\n", travel_points);
        }

        else if(!strcmp(answer, "international"))
        {
                travel_points*=4;
                printf("Getting 4x more points! New total: %d\n", travel_points);
        }

        else if((strcmp(answer, "exit")==0))
        {

                if(travel_points<100)
                {
                        printf("Sorry, not enough points for a free trip.\n");

                }

                else if(travel_points< 250)
                {
                        printf("Free dinner at Blue Sushi.\n");
                }

                else
                {
                        printf("Total travel points accumulated: %d. You get a free trip.\n",
travel_points);
                }

                check=1;
        }

        else
        {
                printf("Not a valid command.\n");

        }

    }

}
```

1. From the code, we can say that the function *strcmp()* has 2 parameters.
2. If the user enters *Exit*, the program will terminate.
3. The only way to stop the *while* loop would be for the user to enter any integer other than 0.
4. Entering the sequence *state, national, international, state*, would result in a free trip for the user.

5. Assuming we don't know where the function declaration of *printf* is, we can deduce from the code that it must be in *stdio.h*.
6. It would be perfectly acceptable to change *char answer[20]* to *char answer[10].*
7. The function *strcmp()* returns an integer.
8. *strcmp(answer, "exit")==0* can be rewritten as *!strcmp(answer, "exit*") without modifying the function of the program.
9. If a user entered the sequence *state* followed *national*, the value of the *total_points* variable would be *21*.
10. This program uses two preprocessor directives and one header.

1. It is true that the strcmp has 2 parameters. It has answer and "state" or the other two.
2. False. The program doesn't terminate when the user enters exit, rather it print put a statement based on the amount of points or say it isn't a valid command.
3. True. Because the while loop says while it is not check and check is 0, then entering a number other than 0 ends it.
4. False. Entering state, national, international state would not result in enough points for a free trip.
5. True. The printf function is held in the standard input or output function listed in the header.
6. False. Changing the length of the string wouldn't allow for a longer string to be entered
7. True. Strcmp returns an integer 1 for true and 0 for false
8. True, both formats have the same meaning
9. False, the total points is 21
10. True, the preprocessor are stdio and string while the one header is the main function.

.

{
}