

EVALUATION FORM

Team ID _____

Head Delegate _____

School _____

1) How do you cut a cake into 8 equal pieces using no more than 3 cuts?

2) You intercepted this coded message sent by an enemy operative:

YYURYYUBICURYY4ME

What message is he sending?

3) A body was found dead at the bottom of a multi-story building. The person was expected to have committed suicide. Homicide detective was called for an investigation. He went in the room on the first floor, opened the window facing the direction in which the body was found and flipped a coin. He went on the second floor and repeated the process. He keeps on doing that until he reaches the last floor and then he gave the order of investigating the murder. How did he know that this was not a suicide?

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4) Which force provides the main power for a catapult?

- a. Lift
- b. Gravity
- c. Torsion
- d. Tension

e. None of the above

5) In order for a projectile to travel the furthest distance possible, what angle should it be launched from?

a. 30°

b. 45°

c. 60°

d. 90°

e. Can't be determined

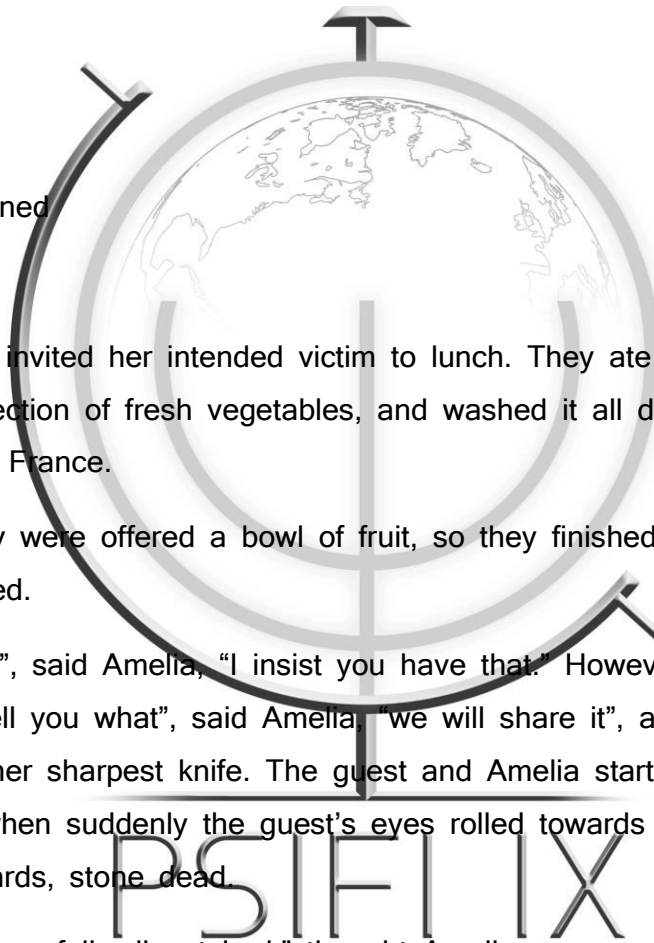
6) Amelia Hastings invited her intended victim to lunch. They ate a meal of roast chicken, with a selection of fresh vegetables, and washed it all down with the finest wine imported from France.

After the meal, they were offered a bowl of fruit, so they finished off with figs and grapes freshly picked.

"Just one apple left", said Amelia, "I insist you have that." However the guest said, "No, I couldn't". "Tell you what", said Amelia, "we will share it", and promptly sliced it neatly in two with her sharpest knife. The guest and Amelia started to eat their respective halves when suddenly the guest's eyes rolled towards the ceiling and he keeled over backwards, stone dead.

"Another victim successfully dispatched," thought Amelia.

Why was Amelia not poisoned after eating the same apple?



7) You're eating in a restaurant and a person on the table next to you chokes on his food and is unable to breathe. There isn't enough time to wait for an ambulance to arrive, what steps would you take to help him?

8) Write algorithm/instructions for a simple object avoidance robot? (You can write it in any format).

9) Amjad and Shabbir asked Fatima her birthday. Fatima said it was either

January 6, 7, 10

February 8, 9

March 5, 7

April 5, 6, 8

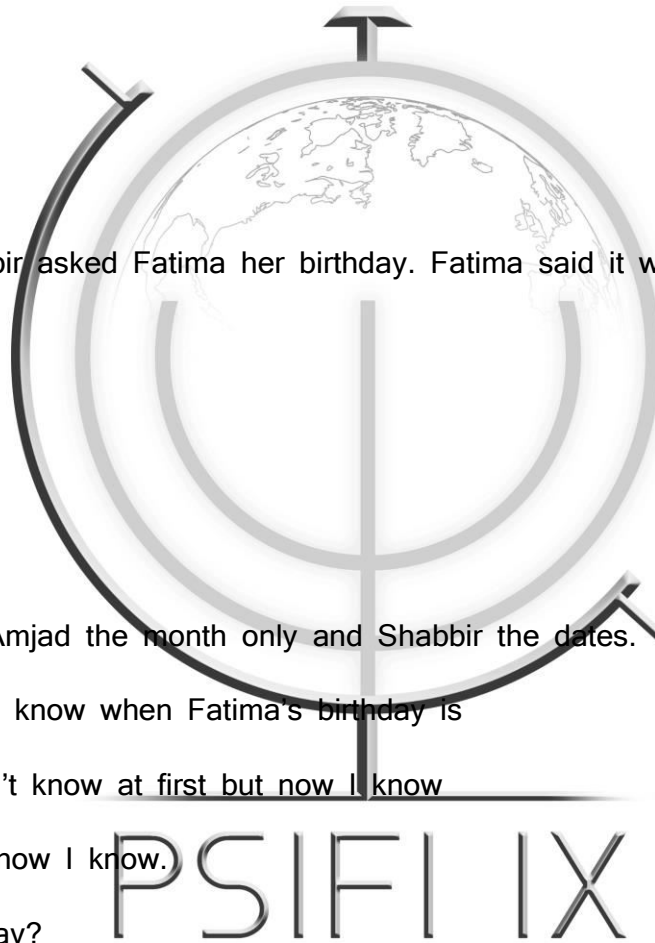
Then Fatima tells Amjad the month only and Shabbir the dates.

Amjad says: I don't know when Fatima's birthday is

Shabbir says I didn't know at first but now I know

Amjad says: Then now I know.

When is her Birthday?



10) Paul turns on a bulb every ten minutes. Every bulb lights for 40 minutes and then goes out. How many bulbs are alight 55 minutes after Paul turned the first bulb on?

11)The digital flight control system uses what means to transfer inputs to the control surfaces?

- A) control cables
- B) full fly wire
- C) mechanical linkage
- D) a combination of control cables and electrical wire

12)what happens if a flight data recorder memory capacity is exceeded?

- A) writeover will occur
- B)"caution-caution" is heard on headsets
- C)the data recorder automatically shuts off
- D) the light data recorder caution light illuminates

13)Which the only number whose additive and multiplicative inverse is the same? Explain.

14) How many democratic governments in Pakistan have completed a full term. Also, name them?

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15)



A 5 X 10 centimeter swiss chocolate bar has a 5 X 1 centimeter piece broken off the right side, as shown in the image below. How many more 5 X 1 centimeter pieces can you break off of the remaining chocolate bar?

Also, there's a 5-millimeter hole in the bar 1 centimeter in from the left side and 2.5 centimeters up from the bottom.

Any piece that has even a tiny bit of this hole in it can't be included in your answer.

16)



A doctor in Pakistan needs to visit nine different hospital rooms. After studying the room numbers, she notices that she can visit all the rooms in one round. In order to do so, she must go into a room that has at least one shared digit with the room she's currently in.

Using this method, which room will she visit fifth? Circle the correct number.