## ANSWERS MAY VARY

1. A father, mother, and son decide to hold a two-person board game tournament. After each game the winner plays the person who did not play in the game just completed. Each game must end with one of the players winning, no ties. The first player to win any three games, which does not have to be in order, wins the tournament. Since the son is the youngest he is given the choice of playing the first game or sitting out the first game. What would you tell the son to do, play or not play? Why?

You should tell him to play first because it gives him more chances to win.
2. You are invited to play a game. The rules are: Shuffle an ordinary deck of cards and turn them face up in pairs (two at a time). If both cards are black, you get them. If both cards are red, the other player gets them. If one is red and one is black, the pair belongs to neither player and are put a side. You have to pay $\$ 5.00$ to play the game. When all the cards are used the game is over. For every card you have more than the other player you get $\$ 10.00$. Would you play this game? Why?

An ordinary deck of cards has the same number of black and red cards. This means that every game will end in a tie. Both players will have the same number of cards. So you can never win the $\$ 10.00$. You should not play.
3. Yesterday, a man woke up to find all his clocks had stopped. He managed to get them working but did not have access to the correct time to reset them properly. He wrote the time of one of the clocks on a piece of paper and walked to the home of a friend who had the correct time. After some time visiting with him, he walked home. It took him the exact same time to walk there and back. Upon arriving at home, he set his clock to the correct time even though he did not know how long he had walked. How did he do it?

Time (not correct) when he left the house.
Time (not correct) when he returned home.

Actual time when he arrived at his friend's house.
Actual time when he left his friend's house.

When he arrived at his friend's house he wrote down the actual time and when he left he wrote the time down again. That told him two things: The real time and how long he visited his friend. When he arrived home he calculated how long he was gone. Then subtracted the time he was at his friend's house. This told him how long it took him to walk to and from the houses. He then cut that time in half and added it to the time he left his friend's house to get the correct time.

