

NAME: _____

Instructions for the Football Play-Calling Experiment - Offense

You are a football coach and your goal is to obtain as many yards as possible on this particular drive. You have two options: to run or to pass. Likewise, your opponent, the defense can prepare to stop the run or stop the pass.

The payoff matrix for this game is as follows:

(Offensive payoff in terms of yards gained, Defensive payoff in terms of yards given up)

		Defense prepared to stop	
		Run	Pass
Offensive play	Run	(1,1)	(5,5)
	Pass	(7,7)	(2,2)

Your goal as the coach controlling the offense is to gain as many yards as possible. You will choose to run or pass in order to do this. You will have 3 opportunities to play this game, with each opportunity having 9 separate plays. For every 10 yards you gain in this experiment, you will receive 1 miniature candy of your choice (you can choose Reeses miniatures, Hershey’s Kisses, or Lifesavers).

SESSION 1:

Please find a person in class who is a defensive coach in this experiment. Once you find an opponent, both of you will individually make decisions on the plays you will choose.

There are 9 plays – you must decide whether the offense should run the ball or pass the ball in each of these 9 plays (i.e., fill in column 2). Please make your choices now. **DO NOT SHARE YOUR CHOICES WITH YOUR OPPONENT UNTIL AFTER YOU HAVE BOTH MADE YOUR DECISIONS**

Play #	Your decision: run or pass?	Your opponent’s decision: defending the run or pass?	Yards gained
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1			
2			
3			
4			
5			
6			
7			
8			
9			
TOTAL YARDS GAINED:			

Now that both you and your opponent have chosen your plays, you determine the yards gained for each play.

Who seemed to do better in this session, you or your opponent? Why?

SESSION 2:

For this session, you must tell the defensive coach how many times out of nine you will run and how many times out of nine you will pass. Your choices below **MUST** be consistent with the information you tell the defensive coach. Once you tell the defensive coach this information, you must determine whether you will run or pass on each of the nine plays. The defensive coach will simultaneously determine whether to stop the run or the pass on each of the nine plays. **DO NOT SHARE YOUR CHOICES WITH YOUR OPPONENT UNTIL AFTER YOU HAVE BOTH MADE YOUR DECISIONS**

Please make your choices now.

Play #	Your decision: run or pass?	Your opponent's decision: defending the run or pass?	Yards gained
1			
2			
3			
4			
5			
6			
7			
8			
9			
TOTAL YARDS GAINED:			

Now that both you and your opponent have chosen your plays, you determine the yards gained for each play.

Who seemed to do better in this session, you or your opponent? Why?

SESSION 3:

For this session, the defensive coach must tell you how many times out of nine he/she will defend against the run and how many times out of nine he/she will defend against the pass. Once he/she tells you this, you must determine whether you will run or pass in each of the nine plays. The defensive coach will simultaneously determine whether to defend against the run or pass in each of the nine plays. **DO NOT SHARE YOUR CHOICES WITH YOUR OPPONENT UNTIL AFTER YOU HAVE BOTH MADE YOUR DECISIONS**

Please make your choices now.

Play #	Your decision: run or pass?	Your opponent's decision: defending the run or pass?	Yards gained
1			
2			
3			
4			
5			
6			
7			
8			
9			
TOTAL YARDS GAINED:			

Now that both you and your opponent have chosen your plays, you determine the yards gained for each play.

Who seemed to do better in this session, you or your opponent? Why?

Your total yards gained and candies earned:

Total yards gained in session	
1	
2	
3	
Total yards gained	
Candies earned (yards/10)	

Discussion questions:

Did you tend to choose to either run or pass more often? Why?

What would be the optimal strategy for an offense in this game?

How does the yardage you can gain by running vs. passing affect the optimal strategy?

What do you think the optimal strategy would be for the defense in this game?

NAME: _____

Instructions for the Football Play-Calling Experiment - Defense

You are a defensive football coach and your goal is to hold the offense to as few yards as possible on this particular drive. You have two options: you can try to stop the run or try to stop the pass. Your opponent, the offense, can choose to either run or pass.

The payoff matrix for this game is as follows:

(Offensive yards gained, Defensive yards given up)

		Defense prepared to stop	
		Run	Pass
Offensive play	Run	(1,1)	(5,5)
	Pass	(7,7)	(2,2)

Your goal as the coach controlling the defense is to call plays such that you minimize the yardage that your opponent gains. You will have 3 opportunities to play this game, with each opportunity having 9 separate plays. You will start this game with a credit of 20 candies. For every 10 yards you give up this experiment, however, you will lose 1 candy.

SESSION 1:

Please find a person in class who is an offensive coach in this experiment. Once you find an opponent, both of you will individually make decisions on the plays you will choose.

There are 9 plays – you must decide whether your defense should prevent the run or the pass in each of these 9 plays. Please make your choices now. **DO NOT SHARE YOUR CHOICES WITH YOUR OPPONENT UNTIL AFTER YOU HAVE BOTH MADE YOUR DECISIONS**

Play #	Your decision: defend the run or pass?	Your opponent's decision: run or pass?	Yards your opponent gained
1			
2			
3			
4			
5			
6			
7			
8			
9			
TOTAL YARDS GAINED:			

Now that both you and your opponent have chosen your plays, you determine the yards gained for each play.

Who seemed to do better in this session, you or your opponent? Why?

SESSION 2:

For this session, the offensive coach must tell you how many times out of nine he/she will run and how many times out of nine he/she will pass. Your opponent's choices **MUST** be consistent with the information he/she is telling you. Once he/she tells you this information, you must determine whether you will defend against the run or the pass on each of the nine plays. The offensive coach will simultaneously determine whether to run or pass in each of the nine plays. **DO NOT SHARE YOUR CHOICES WITH YOUR OPPONENT UNTIL AFTER YOU HAVE BOTH MADE YOUR DECISIONS**

Please make your choices now.

Play #	Your decision: run or pass?	Your opponent's decision: run or pass?	Yards gained
1			
2			
3			
4			
5			
6			
7			
8			
9			
TOTAL YARDS GAINED:			

Now that both you and your opponent have chosen your plays, you determine the yards gained for each play.

Who seemed to do better in this session, you or your opponent? Why?

SESSION 3:

For this session, you must tell the offensive coach how many times out of nine you will defend against the run and how many times out of nine you will defend against the pass. Your choices below **MUST** be consistent with the information you tell the offensive coach. Once you tell the defensive coach this information, you must determine whether you will defend against the run or the pass for each of the nine plays. The defensive coach will simultaneously determine whether to stop the run or the pass on each of the nine plays. **DO NOT SHARE YOUR CHOICES WITH YOUR OPPONENT UNTIL AFTER YOU HAVE BOTH MADE YOUR DECISIONS**

Please make your choices now.

Play #	Your decision: run or pass?	Your opponent's decision: run or pass?	Yards gained
1			
2			
3			
4			
5			
6			
7			
8			
9			
TOTAL YARDS GAINED:			

Now that both you and your opponent have chosen your plays, you determine the yards gained for each play. Fill in your opponent's choices for each of the 9 plays, and the yards that you gave up.

Who seemed to do better in this session, you or your opponent? Why?

Your total yards given up and candies earned:

Total yards gained in session	
1	
2	
3	
Overall yards	
Yards/10 (number of candies you lost)	
Starting candies	20
# of candies you earned (starting candies minus candies you lost)	

Discussion questions:

Did you tend to defend the run or the pass more often? Why?

What would be the optimal strategy for a defense in this game?

How does the yardage you can gain by running vs. passing affect the optimal strategy?

What do you think the optimal strategy would be for the offense in this game?