

# Algebra Activity: Super Bowl Moves

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CALCULATORS: Casio: *fx-260 Solar* • Casio: *fx-260 Solar School*

## Teaching Notes

**Grade Level:** Middle School

**Topic:** Integers

**Objective:** To add and subtract integers using the +/- key.

### Using the Activity:

This activity demonstrates how to use the *fx-260* to add or subtract integers.

To enter -3, press **3 +/-**.

The +/- key is the change of sign key and changes a positive number to a negative number and vice versa.

To add  $-7 + 4 =$ , use the following keystrokes:

Press **7 +/- + 4 =** the answer is -3.

To subtract  $-7 - 4 =$ , use the following keystrokes:

Press **-7 +/- 4 =** the answer is -11.

To add  $3 + -4 =$ , use the following keystrokes:

Press **3 + 4 +/- =** the answer is -1.

To subtract  $3 - -4 =$ , use the following keystrokes:

Press **3 - 4 +/- =** the answer is 7.

Students will work with their partner to answer their cards and record their results on their recording sheet. Emphasis is placed on recording the keystroke sequence used to obtain their answers. Students are also asked to check their partner's results to verify that each other's answers are correct. Students are then asked to work with their partners to create five word problems of their own, along with the keystrokes used to determine the answer on the calculator.

### Extension:

Students can use the results of their cards to recreate their teams' moves to determine if either made a touchdown. Additionally, the cards students create should be used for additional practice during the year as warm-up questions or as additional partner work, being sure to circulate questions to students that did not create the questions they are asked to solve.

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### Student Worksheet

Complete this activity with a partner using your *fx-260* calculator.

This activity will provide practice with entering integers and operations of addition and subtraction with integers.

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Press **7 +/- + 4 =** the answer is -3.

To subtract  $-7 - 4 =$ , use the following keystrokes:

Press **-7 +/- 4 =** the answer is -11.

To add  $3 + -4 =$ , use the following keystrokes:

Press **3 + 4 +/- =** the answer is -1.

To subtract  $3 - -4 =$ , use the following keystrokes:

Press **3 - 4 +/- =** the answer is 7.

Shuffle your set of Super Bowl cards. Each player draws a card and works the problem on their calculator. Record the keystrokes you used to determine your answer in your recording sheet. Once you have solved your five cards, check the work of your partner.

Then create five cards of your own with your partner. Record your cards and your keystroke solution for each on your Recording Sheet.

### Extension:

Use your cards to recreate a game with your partner. Use the gains or losses of each card to represent each of your teams' moves. Did your team or your partner's team score a touchdown?

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## CARDS

### *Card 1*

Your team gains 12 yards. The quarterback is sacked for a loss of 7 yards. How many yards does your team gain or lose?

### *Card 2*

Your team throws a pass, which is dropped by the fullback for a loss of 15 yards. On the next play, the quarterback is sacked for an additional 12 yard loss. How many yards does your team gain or lose?

### *Card 3*

Your team passes for 40 yards. The receiver fumbles for a loss of 13 yards. How many yards does your team gain or lose?

### *Card 4*

Your quarterback throws a pass for a gain of 55 yards. The running back is tackled for a 7 yard loss. How many yards does your team gain or lose?

### *Card 5*

Your team runs for 38 yards. The quarterback is sacked on the second play for a loss of 42 yards. How many yards does your team gain or lose?

### *Card 6*

Your team receives an offside penalty of 5 yards. Your quarterback is slow with the count, and your team receives another penalty of 5 yards for delay of game. How many yards does your team gain or lose?

### *Card 7*

Your running back fumbles and loses 16 yards. On the next play he gains 20 yards. How many yards does your team gain or lose?

### *Card 8*

Your team gains 23 yards on a quarterback sneak. The opposing team is penalized 15 yards for unnecessary roughness. How many yards does your team gain or lose?

### *Card 9*

Your center fumbles the snap and loses 7 yards. Then the quarterback runs for 34 yards. How many yards does your team gain or lose?

### *Card 10*

Your quarterback is sacked for a loss of 13 yards. On the next play your team is penalized 15 yards for a face mask violation. How many yards does your team gain or lose?

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## RECORDING SHEET

Record your name and your partner's name. List the keystrokes you and your partner used to enter and determine a solution for each of the cards you drew.

PLAYER 1:	PLAYER 2:
Card 1	Card 1
Card 2	Card 2
Card 3	Card 3
Card 4	Card 4
Card 5	Card 5
Card 6	Card 6
Card 7	Card 7
Card 8	Card 8
Card 9	Card 9
Card 10	Card 10

Student Created Problems:

Card 1	Card 1
Card 2	Card 2
Card 3	Card 3
Card 4	Card 4
Card 5	Card 5