

Lesson Activity

Application of Absolute Values

The Lesson Activity will help you meet these educational goals:

- **Content Knowledge**—You will study the absolute value of a rational number as its distance from zero on the number line.
- **Mathematical Practices**—You will make sense of problems and solve them and use mathematics to model real-world situations.
- **STEM**—You will apply mathematical and technology tools and knowledge to analyze real-world situations.
- **21st Century Skills**—You will use critical-thinking and problem-solving skills, assess and validate information, and communicate effectively.

Directions

Read the instructions for this self-checked activity. Type in your response to each question, and check your answers. At the end of the activity, write a brief evaluation of your work.

Activity

Terrence was watching his favorite football team, the Tigers. While watching the Tigers' plays, he noted that various plays went for various distances, some positive and some negative. Gain and loss are relative to the team that has the ball. Any play that moves the team that possesses the ball closer to scoring is considered a gain in yards. Any play that pushes the team with the ball farther away from scoring is a loss in yards. Understanding absolute values will help Terrence know what each of the positive and negative numbers means.

Part A

The Tigers' first play when they had possession of the ball went for -3 yards. Did the Tigers gain or lose yards on that play? How many yards did they gain or lose?

Answer:

Space used(includes formatting): 48 / 30000

Show Sample Answer

Part B

The Tigers' second play went for yards. Did the Tigers gain or lose yards on that play? How many yards did they gain or lose?

Answer:

Space used(includes formatting): 54 / 30000

Show Sample Answer

Part C

The Tigers' third play went for -1.2 yards. Did they gain or lose yards on that play? How many yards did they gain or lose?

Answer:

Space used(includes formatting): 50 / 30000

Show Sample Answer

Part D

The first play by the Tigers' opponents, the Falcons, went for +4 yards. Did the Falcons gain or lose yards on that play? How many yards did they gain or lose?

Answer:

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Show Sample Answer

Part E

The Falcons' second play went for -2.3 yards. Did the Falcons gain or lose yards on that play? How many yards did they gain or lose?

Answer:

Space used(includes formatting): 50 / 30000

Show Sample Answer

Part F

The Falcons' third play went for yards. Terrence thinks they lost yards, but his friend Ted thinks they gained yards. Who is right and why?

Answer:

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Show Sample Answer

Part G

The Tigers' next play went for -4.3 yards. Did they gain or lose yards on that play? How many yards did they gain or lose?

Answer:

Space used(includes formatting): 50 / 30000

Show Sample Answer

Part H

The Falcons' next play went for -5 yards. Did they gain or lose yards on that play? How many yards did they gain or lose?

Answer:

Space used(includes formatting): 48 / 30000

Show Sample Answer

Part I

On one of the Tigers' plays, Terrence thought they went for +3 yards, but his father told him they actually lost three yards. What should the scoreboard show?

Answer:

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Show Sample Answer

Part J

When they played the Sharks, the Tigers' first play went for +2.2 yards. Did the Tigers gain or lose yards? How much did they gain or lose?

Answer:

Space used(includes formatting): 52 / 30000

Show Sample Answer

Self-Evaluation

How did you do? Rate your work on a scale of 1 to 5, with 5 as the highest score. Then write a brief evaluation of your work below. Note what you learned and what challenged you.

Answer:

Space used(includes formatting): 67 / 30000