



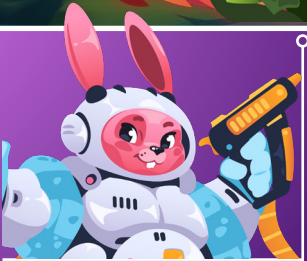
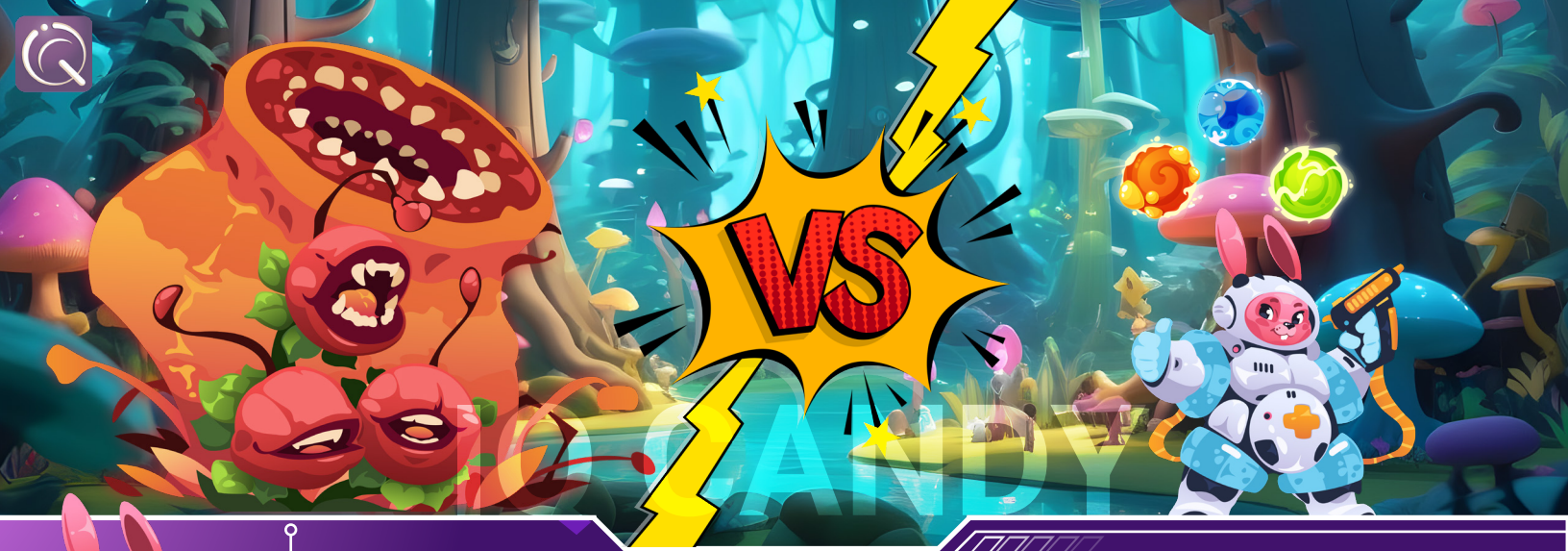
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# MATH QUEST

MODULE 1  
LESSON 2

WHOLE NUMBERS AND INTEGERS





ADVENTURER! I'M IN A TIGHT SPOT HERE. TO DEFEAT THIS ENEMY, I NEED YOUR HELP IN CHANNELING A SUPERMASSIVE ENERGY ATTACK. READY FOR THE CHALLENGE? I'VE SET UP A MAGICAL EQUATION ENERGY BALLS. SOLVE IT, AND WE'LL UNLEASH AN UNSTOPPABLE FORCE AGAINST OUR FOE. GET READY FOR THE MATH CHALLENGE!



#### WORD PROBLEM 1: Compare and Order Integers

A submarine is currently at a depth of -150 meters below sea level. Another submarine is at a depth of -120 meters. Order their depths from least to greatest.

#### WORD PROBLEM 2: Find the Absolute Value of an Expression

A magician is performing a disappearing act. The temperature drops by -8 degrees Celsius during the act. Find the absolute value of this temperature change.

#### WORD PROBLEM 3: Compare and Order Integers

Three football teams have played a certain number of games. The first team won 5 games, the second team lost 3 games, and the third team tied 2 games. Represent the number of games won, lost, and tied by each team using integers. Compare and order the total number of games played by the teams.

Word Problem 1:

Word Problem 2:

Word Problem 3:

# THE MATH EXPEDITION

YOU EMBARK ON A MATH EXPEDITION THROUGH A CHALLENGING TERRAIN. ALONG THE WAY, YOU ENCOUNTER MATHEMATICAL OBSTACLES THAT INVOLVE COMPARING, ORDERING INTEGERS, AND FINDING ABSOLUTE VALUES.



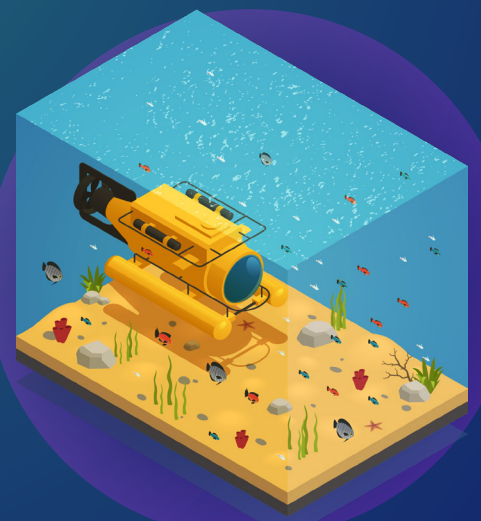
**1. MOUNTAIN CLIMB:** YOU NEED TO CLIMB TWO MOUNTAINS WITH ELEVATIONS OF  $-300$  METERS AND  $-200$  METERS. ORDER THE ELEVATIONS FROM LOWEST TO HIGHEST.



**2. TEMPERATURE CHALLENGE:** AS YOU REACH A COLD REGION, YOU FIND A THERMOMETER READING  $15$  DEGREES CELSIUS COLD. FIND THE ABSOLUTE VALUE OF THIS EXPRESSION TO DETERMINE THE ACTUAL TEMPERATURE.



**3. FOOTBALL TOURNAMENT:** IN A TOURNAMENT, TEAM A WON  $8$  GAMES, TEAM B LOST  $5$  GAMES, AND TEAM C TIED  $3$  GAMES. REPRESENT THE RESULTS USING INTEGERS AND ORDER THE TEAMS BASED ON THEIR OVERALL PERFORMANCE.



**4. SUBMARINE DIVE:** TWO SUBMARINES ARE CURRENTLY AT DEPTHS OF  $-180$  METERS AND  $-160$  METERS. ORDER THEIR DEPTHS FROM LEAST TO GREATEST.

**CAN YOU SUCCESSFULLY COMPLETE THE MATH EXPEDITION AND NAVIGATE THROUGH THESE CHALLENGES USING YOUR UNDERSTANDING OF COMPARING, ORDERING INTEGERS, AND FINDING ABSOLUTE VALUES?**

**1. Mountain Climb**

**2. Temperature Challenge**

**3. Football Tournament**

**4. Submarine Dive**





## Whole Numbers and Integers - Answer Key

### L1a: Compare and Order Integers

#### 1. Compare and order integers.

### L1b: Find the Absolute Value of an Expression

#### 1. Find the absolute value of an expression

### Word Problem 1: Compare and Order Integers

A submarine is currently at a depth of -150 meters below sea level. Another submarine is at a depth of -120 meters. Order their depths from least to greatest.

The submarines' depths from least to greatest are: -150 meters, -120 meters.

### Word Problem 2: Find the Absolute Value of an Expression

A magician is performing a disappearing act. The temperature drops by -8 degrees Celsius during the act. Find the absolute value of this temperature change.

Temperature drop:  $-8^{\circ}\text{C}$ . The absolute value of  $|-8|$  is 8 degrees Celsius.

### Word Problem 3: Compare and Order Integers

Three football teams have played a certain number of games. The first team won 5 games, the second team lost 3 games, and the third team tied 2 games. Represent the number of games won, lost, and tied by each team using integers. Compare and order the total number of games played by the teams.

Representing the number of games won, lost, and tied by each team using integers:

Team A: +8 games (won)

Team B: -5 games (lost)

Team C: +3 games (tied)

Ordering the teams based on the total number of games played: B (lost), C (tied), A (won).

### Word Problem Challenge: The Math Expedition

#### 1. Mountain Climb:

Order of elevations from lowest to highest: -300 meters, -200 meters.

#### 2. Temperature Challenge:

The absolute value of the expression  $-15$  is  $|-15|$  is 15.

#### 3. Football Tournament:

Ordering the teams based on overall performance: B (lost), C (tied), A (won).

#### 4. Submarine Dive:

Order of depths from least to greatest: -180 meters, -160 meters.

