Real Numbers

Common Mistakes
Real Numbers – Adding and Subtracting

How to Add and Subtract

- If the signs are the same, add the numbers and keep the sign.
  - $-5 + (-8) = -13$
  - $4 + 12 = 16$
  - $(-6) + (-15) = -21$

- If the signs are different, subtract the numbers and take the sign of the larger number.
  - $-8 + 6 = -2$
  - $5 + (-3) = 2$
  - $(-7) + 4 = -3$

Common Mistakes

- Getting confused by parenthesis.
  - The parenthesis below is only for separating the -8 from the addition sign. It does not mean multiply.
    - $-5 + (-8) = -13$

- Getting confused by which number is larger.
  - $-12 + 8 = -4$  The negative 12 is the larger number. (although on the number line it is smaller).
  - Look at it this way, there are 12 negatives and 8 positives… which one are there more of?
Real Numbers – Multiplying and Dividing

How to Multiply and Divide

- Signs are the same, the answer is positive.
  
  \((-3) \cdot (-2) = 6\)
  
  \(5 \cdot 4 = 20\)
  
  \(-\frac{8}{4} = 2\)

- Signs are different, the answer is negative.

  \((-3) \cdot (2) = -6\)
  
  \(-5 \cdot 4 = -20\)

- Another option is if you have a string of negative and positive numbers, count the number of negatives

  - If it’s an odd number, the answer is negative.
    
    There are 3 negative signs so the answer is negative
    
    \(-4 \cdot 3 \cdot -2 \cdot -5 = -120\)

  - If it’s an even number, the answer is positive.
    
    There are 2 negative signs so the answer is positive
    
    \(-4 \cdot 3 \cdot 2 \cdot -5 = 120\)

Common Mistakes

- Confusing Multiplying and Dividing real numbers with Adding and Subtracting real numbers.

- Multiplying or dividing numbers incorrectly

Complete Manual: \Real Numbers_number line_absolute value Review.docx

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