Algebra I Class Schedule for Thursday, November 6, 2008

Materials:
1. Pencils (in the case on my desk)
2. Calculators (in the case on my desk)
3. Handouts (attached)
4. Notebooks and Binders (in class)

Do Now:

I. From Mixed Number to Improper Fraction to Mixed Number
   Fill in the blanks!

<table>
<thead>
<tr>
<th>Operation</th>
<th>First Step</th>
<th>Improper Fraction Math Key!</th>
<th>Mixed Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ \frac{2}{3} + \frac{1}{4} ]</td>
<td></td>
<td></td>
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<tr>
<td>[ 5 \frac{3}{4} - 3 \frac{1}{2} ]</td>
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<tr>
<td>[ (2 \frac{7}{8}) (4 \frac{1}{16}) ]</td>
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<tr>
<td>[ (4 \frac{2}{3}) \div (2 \frac{1}{3}) ]</td>
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</table>

Ex:
\[ \left( \frac{2}{3} \right) \div \left( \frac{1}{3} \right) = \frac{5}{3} \]

\[ \frac{33}{50} \]

or

\[ 33 \frac{3}{50} \]
EXAMPLE 6  Analyze a conditional statement

Identify the hypothesis and the conclusion of the statement "If a number is a rational number, then the number is an integer." Tell whether the statement is true or false. If it is false, give a counterexample.

Solution

Hypothesis: a number is a rational number
Conclusion: the number is an integer

The statement is false. The number 0.5 is a counterexample, because 0.5 is a rational number but not an integer.

✓ GUIDED PRACTICE  for Examples 4, 5, and 6

For the given value of \( a \), find \(-a\) and \(|a|\).

8. \( a = 5.3 \) 9. \( a = -7 \) 10. \( a = -\frac{4}{9} \)

Identify the hypothesis and the conclusion of the statement. Tell whether the statement is true or false. If it is false, give a counterexample.

11. If a number is a rational number, then the number is positive.
12. If the absolute value of a number is positive, then the number is positive.

2.1 EXERCISES

2.1 Use Integers and Rational Numbers

SKILL PRACTICE

1. VOCABULARY Copy and complete: A number is a(n) \( \frac{a}{b} \) if it can be written in the form \( \frac{a}{b} \) where \( a \) and \( b \) are integers and \( b \neq 0 \).

2. VOCABULARY What is the opposite of \(-2\)?

3. ★ WRITING Describe the difference between whole numbers and positive integers.

4. ★ WRITING For a negative number \( x \), is the absolute value of \( x \) a positive number or a negative number? Explain.

GRAPHING AND COMPARING INTEGERS  Graph the numbers on a number line. Then tell which number is greater.

5. 0 and 7 6. 0 and \(-4\) 7. \(-5\) and \(-6\)
8. \(-2\) and \(-3\) 9. 5 and \(-2\) 10. \(-12\) and 8
11. \(-1\) and \(-5\) 12. 3 and \(-13\) 13. \(-20\) and \(-2\)

HOMEWORK KEY

★ = WORKED-OUT SOLUTIONS on p. WS3 for Exs. 7, 29, and 53
★ = STANDARDIZED TEST PRACTICE Exs. 3, 4, 39, 50, 56, and 59
Next: Do the following problems, using your textbook. Following the instructions, and place your answers here.

Page 67: 6, 8, 10, 13

5. __________

6. __________

8. __________

10. __________

13. __________

What are the opposites of the following numbers or terms:

13.) $-13$ ____________

14.) $a$ ____________

15.) $b + a$ ____________

16.) $2 \frac{1}{2}$ ____________
What is the remainder for the following?

13.) $325 \div 60$ 

14.) $23 \div 4$ 

15.) $100 \div 12.5$ 

16.) $7 \div 3$ 

Challenges: Substitute the values shown into the expressions and solve them.

p. 82; 32 – 37

$x = 3.6$ 

$y = 6.6$ 

$z = -11$

Example:

32.) $(x - y) - |z|$ 

$(3.6 - 6.6) - |-11|$ 

$(-3) - |-11|$ 

$(-3) - 11 = -14$
\[ x = 3.6 \quad y = 6.6 \quad z = -11 \]

33.) \((x - |y|) - z\)

34.) \((x - y) - z\)

35.) \((-x - y) - z - 5\)

36.) \(-z + y - x - (-2.4)\)