

Name: _____
Section: _____

MA 201: Practice Exam III

- Draw the colored counters diagram which illustrates the following problems.
 - $(-3) + 2$
 - $3 - (-4)$
- Draw the number line model for the following arithmetic problems. You must model the problem exactly as it is written.
 - $-3 + 4$
 - $-3 - 2$
 - $1 - (-2)$
 - $-3 - (-2)$
- Carefully describe the mailtime stories which model the following arithmetic problems. You must model the problem exactly as it is written. A one sentence story per problem is sufficient.
 - $45 + (-7)$
 - $-32 - 35$
- Carefully describe the mailtime stories which model the following arithmetic problems. You must model the problem exactly as it is written. A one sentence story per problem is sufficient.
 - $3 \cdot (-8) + 10 \cdot 7$
 - $4 \cdot (-5) - 4 \cdot 10$
 - $4 \cdot 3 - 7 \cdot (-21)$
- Compute the following and show your work:
 - $9 +_{12} 9$
 - $7 -_{12} 5$
 - $10 \times_{12} 4$
 - If it is 7:00 now, what time will it be 50 hours from now?
- In arithmetic with integers the following property is true: if $a \times b = 0$, at least one of a and b is zero. Is this also true in 12 hour clock arithmetic? If it is, explain. If it is not true provide a counterexample. Explain with several complete sentences.
- Convert $\frac{23}{5}$ to a mixed number and $5\frac{2}{3}$ to an improper fraction. Show all your work and illustrate with one of the models from class.
- Show that $\frac{a}{b} < \frac{c}{d}$ when $ad < bc$.
 - Determine which fraction is larger: $\frac{3}{5}$ or $\frac{7}{10}$.

9. Illustrate the following computations in the colored regions, fractions strips, and number line models:

(a) $\frac{3}{2} + \frac{3}{4}$

(b) $2\frac{2}{3} - 1\frac{3}{8}$

10. Perform the following fraction computations using the diagrams indicated.

a.) $\frac{7}{8} \times \frac{3}{2}$ (Rectangular Area)

b.) $\frac{22}{7} - \frac{8}{3}$ (Number Line)

c.) $5\frac{2}{3} - 4\frac{1}{3}$ (Shaded Region)

11. A bag contains 14 balls. Some are red and some are yellow. $\frac{3}{7}$ of the balls are yellow. How many of the balls are red?

As always, the best way to study is to complete both the review *and* the practice exam. Please keep this in mind when studying.