

Math 200 - Quiz 8

April 4, 2012

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (1 point) Use the short division algorithm to compute $4689 \div 6$.

$$\begin{array}{r} 781 \text{ r } 3 \\ 6 \overline{) 4689} \end{array}$$

$$4689 \div 6 = 781 \text{ r } 3$$

OR 781.5

2. (2 points) Use any multiplication algorithm to compute $342_{\text{five}} \times 43_{\text{five}}$.

All computations in Base 5

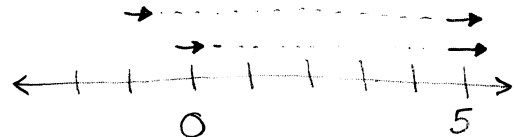
	3	4	2	
3	2' / 2 ₁	3' / 1	1' / 3	4
2	1 / 4	0' / 2 ₁	1 / 1	3
	4	1	1	

32411_{FIVE}

3. (1 point) Use an integer addition model to model $5 + (-6)$.

NUMBER LINE:

- ① START AT ZERO FACING RIGHT
 - ② MOVE FORWARD 5 UNITS
 - ③ STAY FACING RIGHT
 - ④ BACK UP 6 UNITS
- END AT -1
 $5 + (-6) = -1$



4. (1 point) Jerry used the following pattern to illustrate $-3 + 2$. Explain what's wrong with Jerry's approach.

$$-3 + 5 = 2, \quad -3 + 4 = 1, \quad -3 + 3 = 0, \quad -3 + 2 = -1$$

Jerry SHOULD HAVE STARTED WITH A DIFFERENT TYPE OF FACT, NOT THE SAME TYPE (NEG + POS) THAT HE'S TRYING TO MODEL.

$$3 + 2 = 5, \quad 2 + 2 = 4, \quad 1 + 2 = 3, \quad 0 + 2 = 2, \quad -1 + 2 = 1, \quad -2 + 2 = 0,$$

$$-3 + 2 = -1$$

5. (2 points ex cred) On the back of this sheet, use base blocks to compute and illustrate $21_{\text{three}} \times 12_{\text{three}}$.

$$\underbrace{\hspace{2cm}}_{1022_{\text{THREE}}}$$

SEE BACK.



← 2 FLATS, 5 LONGS, 2 UNITS

OR

3 FLATS, 2 LONGS, 2 UNITS

OR

1 LONG FLAT, 0 FLATS, 2 LONGS, 2 UNITS
(CUBE)



1022 | THREE