

Math 200 - Quiz 8

April 13, 2011

Name key

Score _____

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

1. (1 point) Use a multiplication model to show that $3 \times (-3) = -9$.

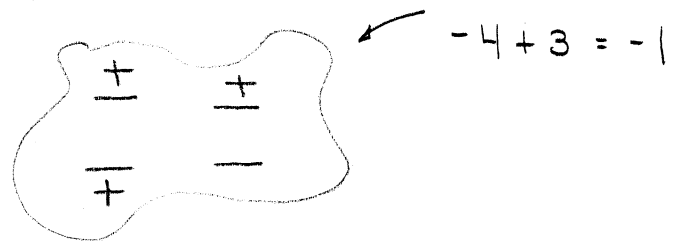
Repeated Addition...

$$3 \times (-3) = -3 + (-3) + (-3) = -9$$

2. (1 point) Use any addition model to illustrate $-4 + 3$.

Charges...

- ① Start with 4 -'s
- ② Put in 3 +'s
- ③ Left with a charge of -1



3. (1 point) Carefully state the rule for adding two numbers with opposite signs.

Subtract their absolute values, least from greatest.

Give the result the sign of the original addend with the greatest abs value, eg. $3 + (-6) = -(6-3) = -3$.

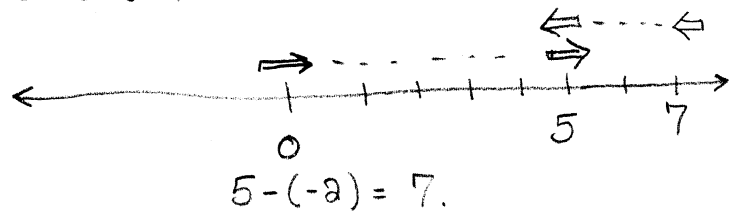
4. (2 points) Use a different subtraction model to model each of the following.

(a) $5 - (-2)$

- ④ Move back 2 to model -2

Number Line...

- ① Start at zero facing right
 - ② Move forward 5 to model +5
 - ③ Turn around to model subtraction
- (b) $-5 - 3$

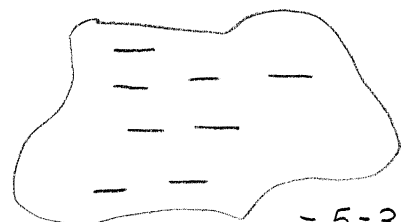
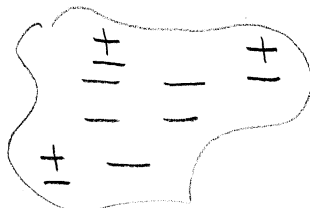


Charges...

Start with -5

Put in 3 neutral ± pairs

Take out 3 +'s



$$-5 - 3 = -8$$