

MA 202: Quiz 1

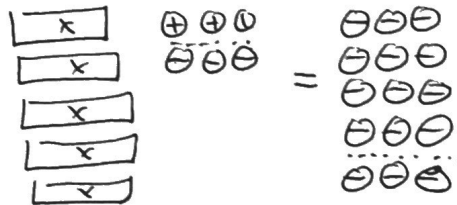
Tuesday 01/23/2018

Name Solution Key

Section _____

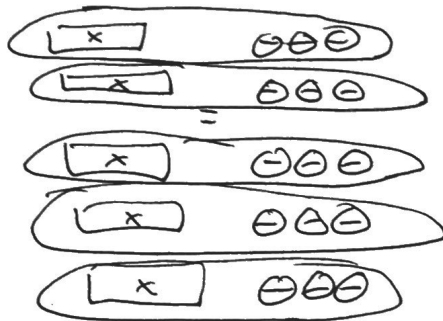
1. Use algebra tiles to model and solve the following equation.

$$5x + 3 = -12$$



Add 3 1-tiles to each side and cancel pairs on the left.

Then group into 5 sets.



So, $x = -3$

2. If possible, find two integers a and b so that $\frac{a}{b} = 2.\overline{7}$. If this is not possible, explain why.

Solution 1: Recall that $0.\overline{1} = \frac{1}{9}$ (as $0.\overline{3} = \frac{1}{3}$). So $0.\overline{7} = 7 \cdot 0.\overline{1} = \frac{7}{9}$, so

$$2.\overline{7} = 2 + \frac{7}{9} = \frac{18}{9} + \frac{7}{9} = \frac{25}{9}.$$

Solution 2: Let $x = 2.\overline{7}$. Then $10x = 27.\overline{7}$, so $9x = 25$. Hence $2.\overline{7} = x = \frac{25}{9}$.