



Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### Integrated Math 3B Homework week of April 16<sup>th</sup> 2018

#### 6-73. A NEVER-ENDING GAME?

Jack and Jill are playing a game in which Jack has two pennies and Jill has four pennies. A coin is tossed. If it lands on heads Jill has to give a penny to Jack. If it lands on tails, Jack gives a penny to Jill. The game is won when one of them has all of the pennies. They think that they can keep playing all day since the coin has an equal chance of landing on heads or tails, so they will just keep passing coins back and forth.

Simulate the coin tosses on your calculator and keep track of the pennies with pencil and paper. Can they keep playing all day, or does one player have a better chance of winning the game? [Homework Help](#) 

6-75. Change each of the following equations from logarithmic form to exponential form, or vice versa. [Homework Help](#) 

a.  $a = \log_b(24)$

b.  $3x = \log_{2y}(7)$

c.  $3y = 2^{5x}$

d.  $4p = (2q)^6$

6-77. What is the inverse of  $f(x) = -x + 6$ ? Justify your answer. [Homework Help](#) 