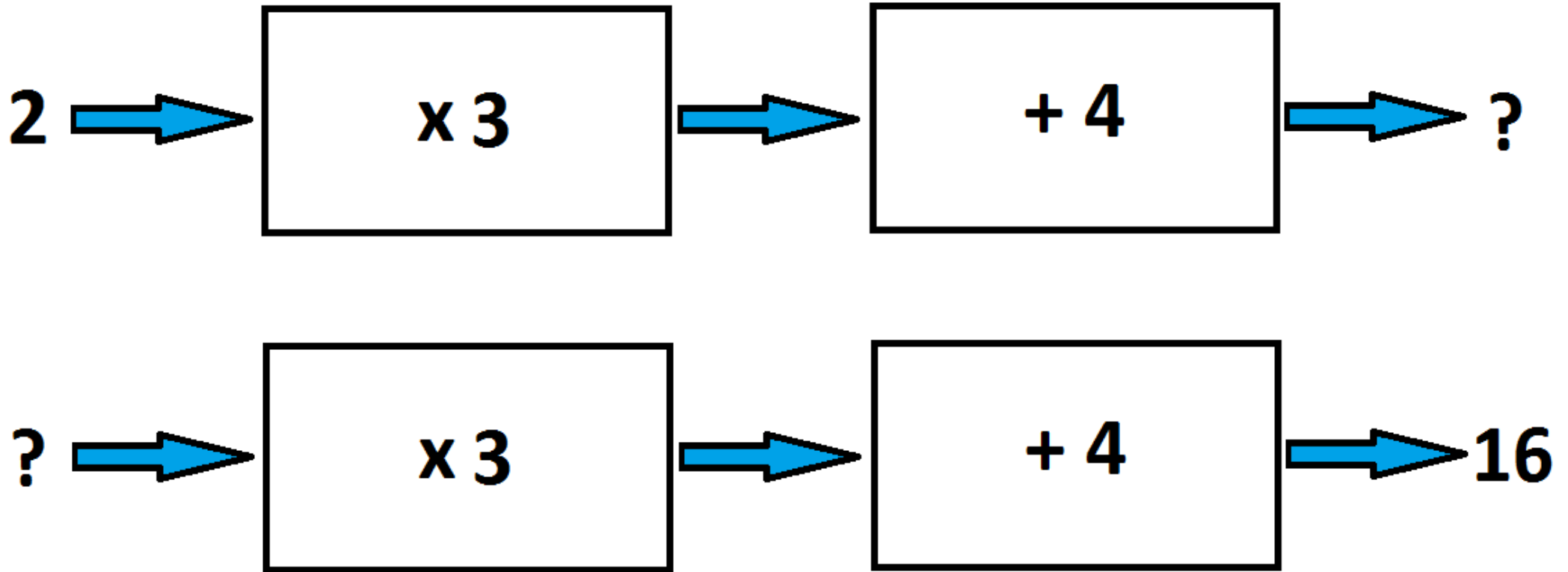


GRADE 3-4: MULTIPLE FUNCTION MACHINES

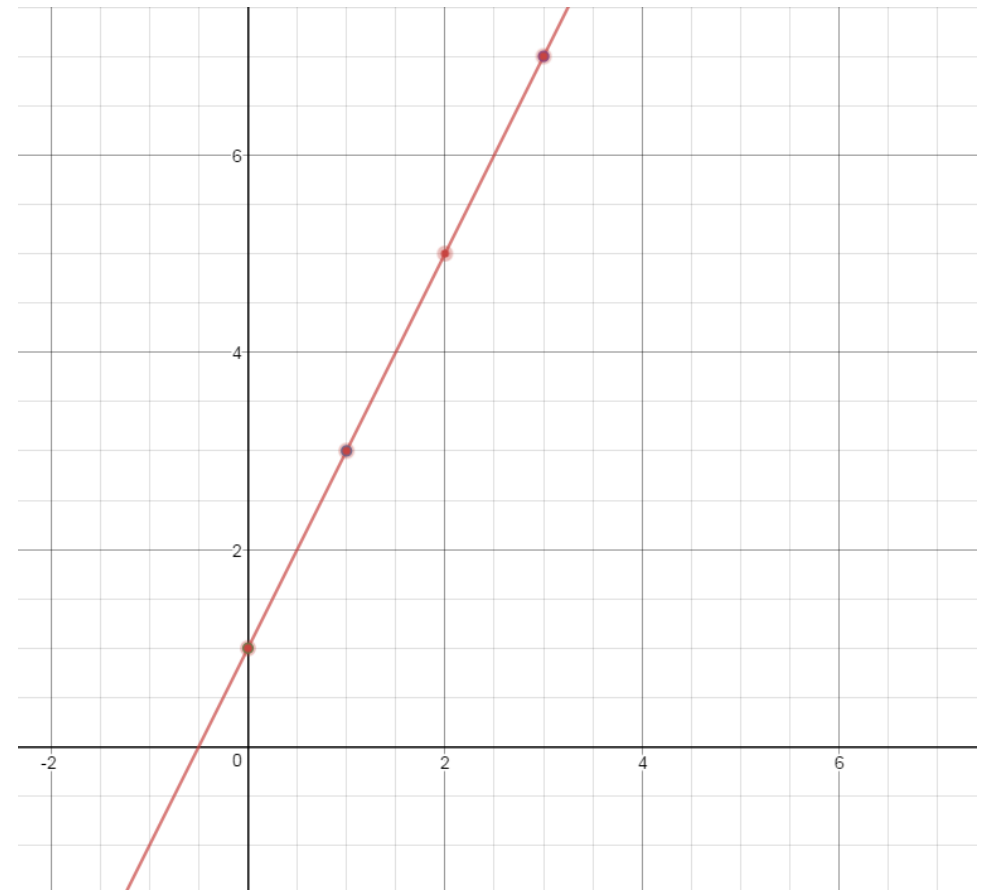


Source: Algebraic Thinking, NCTM, 1999

Functions

$$y = 2x + 1$$

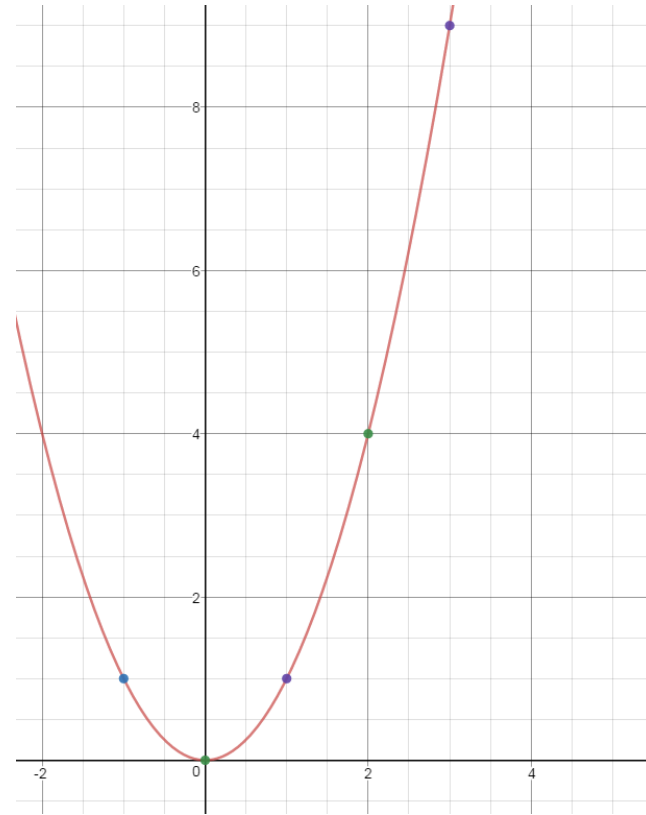
X	Y
0	1
1	3
2	5



Functions

$$y = x^2$$

X	Y
-2	4
-1	1
0	0
1	1
2	4



CUTTING & STACKING PAPER

Take a sheet of paper, cut it in half (maybe fold it first), and then place one half on top of the other half to create a pile of paper with a height equal to the thickness of two sheets of paper. Take that pile, cut it in half (maybe fold it first), and place one half on top of the other. The resulting pile would have a height equal to four sheets of paper. Continue this process three more times.

Source: Trinter & Garofalo, 2011

QUESTION

What would the height of the pile be if you continued this process for a total of 50 times?