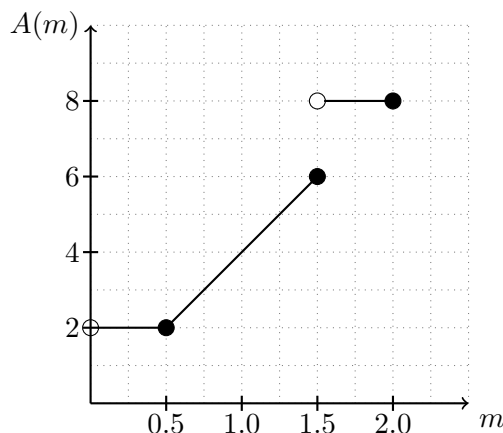


5. [10 points] Some information about three functions A , B and C is given below.



m	3	4	5	10	12
$B(m)$	5	6	6	2	6

$C(m)$ is an exponential decay function with a (non-continuous) decay rate of 70%, and vertical intercept 5.

For each part, you do not need to show your work, but you may receive partial credit for work shown.

a. [2 points] $A(C(1)) = A(1.5) = 6$

b. [2 points] $A(B(10)) = A(2) = 8$

c. [2 points] $\lim_{m \rightarrow \infty} C(m) = 0$ because C is an exponential decay function.

d. [4 points] Find all solutions to the equation

$$B(A(m)) = 6.$$

$$m = \underline{1, 1.25}$$

Solution: $B(A(m)) = 6$ means $A(m) = 4$ or $A(m) = 5$. These equations give us $m = 1$ and $m = 1.25$, respectively.