

1. [14 points] Figure 1 below gives some data for an invertible function $f(x)$ and Figure 2 shows the graph of a function $g(x)$. Use this information to answer the questions below.

x	0	1	2	3	4	5	6
$f(x)$	1	5	8	9	7	4	0

Figure 1

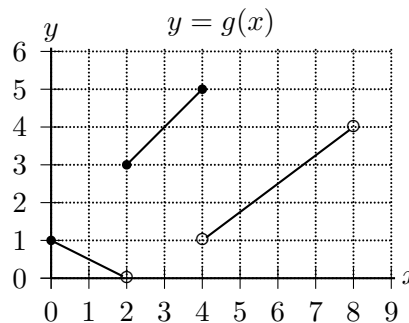


Figure 2

- a. [4 points]

i. Evaluate $2g(2)$.

ii. Evaluate $f^{-1}(5)$.

Answer: _____

Answer: _____

iii. Evaluate $f(f(1))$.

iv. Solve $f(x) = g(3)$ for x .

Answer: _____

Answer: _____

- b. [3 points] Which of the following numbers are in the *range* of g ?
(Circle ALL correct answers.)

0 1 1.5 π 4 5 5.25 7 8 9

- c. [7 points] Find a formula for $g(x)$ as a piecewise-defined function.

$$g(x) = \begin{cases} \text{_____} & \text{if _____} \\ \text{_____} & \text{if _____} \\ \text{_____} & \text{if _____} \end{cases}$$