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Answer all 4 questions. *You must show all of your work* as neatly and clearly as possible and indicate the final answer in the provided region for each **non-graph** question. For all **graph** questions, you should sketch your graph on the grid provided.

1. For the following question, use the function f represented in the table below.

x	0	1	2	3	4	5	6	7	8	9
$f(x)$	74	28	1	53	56	3	36	45	14	47

- (a) Evaluate $f(3)$.

(a) 53

- (b) Solve $f(x) = 1$.

$$f(2) = 1$$

(b) 2

2. Let $f(x) = 8x - 7$. Find $f(x + h)$.

$$f(x) = 8x - 7$$

$$f(2) = 8(2) - 7$$

$$16 - 7 = 9$$

Write your answer in the box below:

$$f(x + h) = 9$$

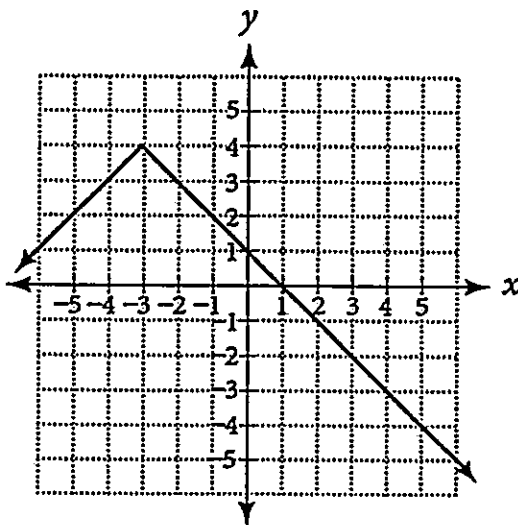
3. Let $f(x) = 3x^2 - 2x$. Find $\frac{f(1+h) - f(1)}{h}$.

$$\begin{aligned} f(x) &= 3x^2 - 2x \\ 3(1)^2 - 2(1) \\ 3 - 2 &= 1 \end{aligned} \quad \frac{3(1+2) - 3(1)}{-2} = \frac{3(-1) - 3}{-2} = \frac{-3 - 3}{-2} = \frac{-6}{-2} = 3$$

Write your answer in the box below:

$$f(x) = 3$$

4. Below is the graph of the function $g(x)$. Use the graph to find $g(4)$.



Write your answer in the box below:

$$g(4) = -3$$