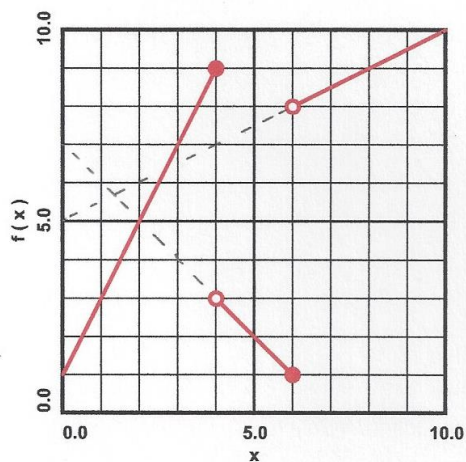


PRE-AP ALGEBRA 2

1) Graph

$$f(x) = \begin{cases} 2x+1 & , \quad x \leq 4 \\ -x+7 & , \quad 4 < x \leq 6 \\ \frac{1}{2}x+5 & , \quad x > 6 \end{cases}$$

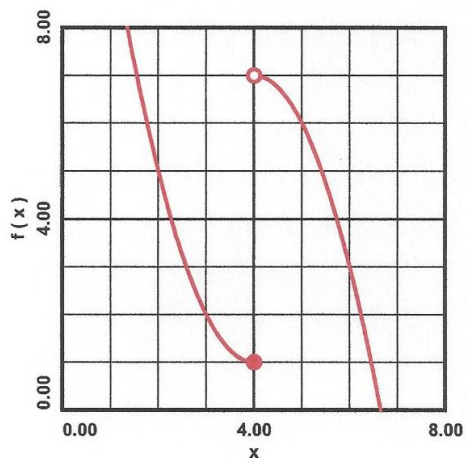
on the axes below.



2) Graph

$$f(x) = \begin{cases} x^2 - 8x + 17 & , \quad x \leq 4 \\ -x^2 + 8x - 9 & , \quad x > 4 \end{cases}$$

on the axes below.



1B.4 CLASSWORK

3) For

$$f(x) = \begin{cases} -x+7 & , \quad x \leq 2 \\ 2^x & , \quad 2 < x \leq 3 \\ -\frac{1}{2}x^2 + 3x + \frac{9}{2} & , \quad x > 3 \end{cases}$$

a) Evaluate $f(1)$, $f(2)$, $f(3)$ and $f(7)$.

b) Calculate the average rate of change of f with respect to x on the interval $3 \leq x \leq 7$.

$$(a) \quad f(1) = -1 + 7 = 6 \leftarrow$$

$$f(2) = -2 + 7 = 5 \leftarrow$$

$$f(3) = 2^3 = 8 \leftarrow$$

$$f(7) = -\frac{1}{2}(7)^2 + 3(7) + \frac{9}{2} = 1 \leftarrow$$

$$(b) \quad \frac{f(7) - f(3)}{7 - 3} = \frac{1 - 8}{7 - 3} = -\frac{7}{4} = -1\frac{3}{4} \leftarrow$$