

1. Write the equation of the line that goes through the point (1, 3)

(2) and is parallel to the line $y = 2x + 5$.

$y = \underline{\hspace{2cm}}$

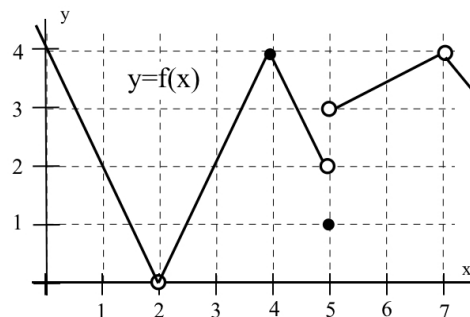
2. The following limits refer to the graph of
- f
- in the diagram.

(a) $\lim_{x \rightarrow 2^+} f(x+3) = \underline{\hspace{2cm}}$ (b) $\lim_{x \rightarrow 4} \text{INT}(f(x)) = \underline{\hspace{2cm}}$

(1 each)

(c) $\lim_{x \rightarrow 5^-} f(x)/f(x+2) = \underline{\hspace{2cm}}$

(d) $\lim_{h \rightarrow 0} \frac{f(3+h) - f(3)}{h} = \underline{\hspace{2cm}}$



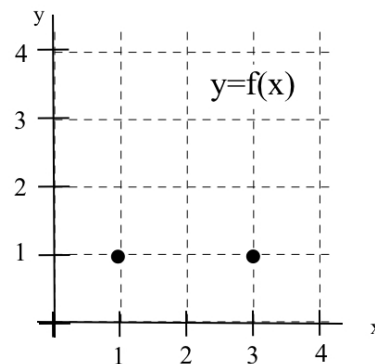
3. $\lim_{x \rightarrow 2} \frac{x^2 - x - 2}{x^2 - 4} = \underline{\hspace{2cm}}$ $\lim_{x \rightarrow 5^-} \frac{|x - 5|}{5 - x} = \underline{\hspace{2cm}}$ $\lim_{x \rightarrow 2.2} \text{INT}(2x+1) = \underline{\hspace{2cm}}$

(2 each)

$\lim_{x \rightarrow 0} \frac{3^x - 1}{x} = \underline{\hspace{2cm}}$ (2 decimal places)

4. Sketch a function
- $y=f(x)$
- for
- $0 \leq x \leq 4$
- so that

(3) $f(1)=1, f(3)=1, \lim_{x \rightarrow 1} f(x)=3$ and $\lim_{h \rightarrow 0} \frac{f(3+h) - f(3)}{h} = -1$

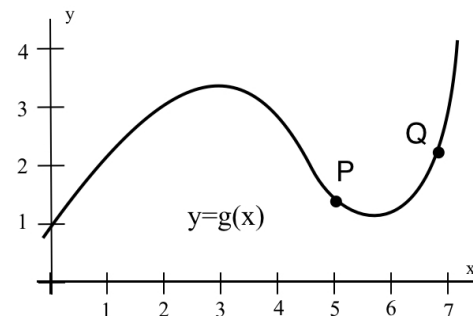


5. (a) Plot reasonable tangent lines to the

graph of $y = g(x)$ at $x = 1$ and at $x = 3$

- (b) As the point P on the graph moves toward the fixed point Q,
-
- the slope of the line PQ

Increases Decreases Stays constant (circle one)



6. If the units of
- x
- are fish and the units of
- $y=f(x)$
- are dollars, then the units of the slope are _____

(1)