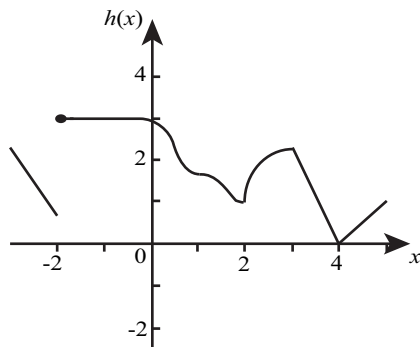


Limits of Functions Worksheet

Find the limits of the following functions.



x	$g(x)$
-2	4
-1.5	3.5
-1.009	3.14321
-1.00001	3.14122
-0.9994	3.14035
0	2

1. From the graph above find $\lim_{x \rightarrow 2} h(x)$.

6. From the table above estimate $\lim_{x \rightarrow -2^+} h(x)$.

2. From the graph above find $\lim_{x \rightarrow -2} h(x)$.

7. Find $\lim_{x \rightarrow \frac{\pi}{2}} \frac{x \sin(2x)}{\cos(x)}$.

3. From the graph above find $\lim_{x \rightarrow 4} h(x)$.

8. Find $\lim_{x \rightarrow 0} \frac{\ln(3^x)}{x} - 5x$.

4. From the graph above find $\lim_{x \rightarrow -2^+} h(x)$.

9. Find $\lim_{y \rightarrow 1} \frac{y^3 - 1}{y - 1}$.

5. From the graph above find $\lim_{x \rightarrow 0^-} h(x)$.

10. For $f(x) = \begin{cases} x - 2 & \text{if } x < -1; \\ ax^2 - 3 & \text{if } x \geq -1. \end{cases}$, find the value of a such that $\lim_{x \rightarrow -1} f(x)$ exists.

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