**1. Complete the following statement.**

|  |  |
| --- | --- |
| **a.** | The graph of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has no breaks, holes, or gaps. You can trace the graph of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ without lifting your pencil.  |
| **b.** | Points in the domain of a function where the function changes from increasing to decreasing or from decreasing to increasing are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_. |

**2. Write T for true or F for false**

|  |  |  |
| --- | --- | --- |
| **a.** | A function $f$ remains constant on an interval $I$ if and only if for every $a$ and $b$ contained in $I$, $f\left(a\right)=f\left(b\right)$ whenever $a<b$ . |  |
| **b.** | A function $f$ is increasing on an interval $I$ if and only if for every $a$ and $b$ contained in $I$, $f\left(a\right)>f\left(b\right)$ whenever $a<b$ . |  |

**Multiple Choices**

**3. Find**  $\lim\_{x\to 0}x^{2}-23$**!**

|  |  |  |
| --- | --- | --- |
| **a.** | $$23$$ |  |
| **b.** | $$-23$$ |  |
| **c.** | $$0$$ |  |

**4. Find**  $\lim\_{x\to 2}\frac{x-5}{x+5}$

|  |  |  |
| --- | --- | --- |
| **a.** | $$-\frac{3}{7}$$ |  |
| **b.** | $$\frac{3}{7}$$ |  |
| **c.** | $$2$$ |  |

**5. Find**  $\lim\_{x\to 1}\frac{2}{x-5}$

|  |  |  |
| --- | --- | --- |
| **a.** | $$-\frac{1}{2}$$ |  |
| **b.** | $$\frac{1}{2}$$ |  |
| **c.** | $$\frac{2}{3}$$ |  |

**ANSWERS**

**1. Complete the following statement.**

|  |  |
| --- | --- |
| **a.** | The graph of a continuous function has no breaks, holes, or gaps. You can trace the graph of a continuous function without lifting your pencil.  |
| **b.** | Points in the domain of a function where the function changes from increasing to decreasing or from decreasing to increasing are called critical points. |

**2. Write T for true or F for false**

|  |  |  |
| --- | --- | --- |
| **a.** | A function $f$ remains constant on an interval $I$ if and only if for every $a$ and $b$ contained in $I$, $f\left(a\right)=f\left(b\right)$ whenever $a<b$ . | **T** |
| **b.** | A function $f$ is increasing on an interval $I$ if and only if for every $a$ and $b$ contained in $I$, $f\left(a\right)>f\left(b\right)$ whenever $a<b$ . | **F** |

**Multiple Choices**

**3. Find**  $\lim\_{x\to 0}x^{2}-23$**!**

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