Unit 3 Derivatives Review

1. Evaluate.
2. b.
3. True or false.
4. A function can be continuous at x = 3, but not differentiable at x = 3.
5. A function can be differentiable at x = 3, but not continuous at x = 3.
6. is continuous at x = 0
7. is differentiable at x = 0
8. is continuous at x = 2
9. is differentiable at x = 2 *f*(x)
10. is continuous at x = 3
11. is differentiable at x = 3 1 2 3 4
12. is continuous at x = 4
13. is differentiable at x = 4
14. Use the table to answer the following.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X |  |  |  |  |
| 3 | 4 | 2 | -6 | 5 |
| 4 | 1 | 8 | -3 | 7 |

1. Find when x = 3. b. Find , when
2. A particle moves along the curve where *s* is measured in meters and *t* in seconds.
3. Find the acceleration at *t* = 1 second. B. When is the particle at rest?
4. Determine the values of *a* and *b* such that *f*(x) is differentiable.