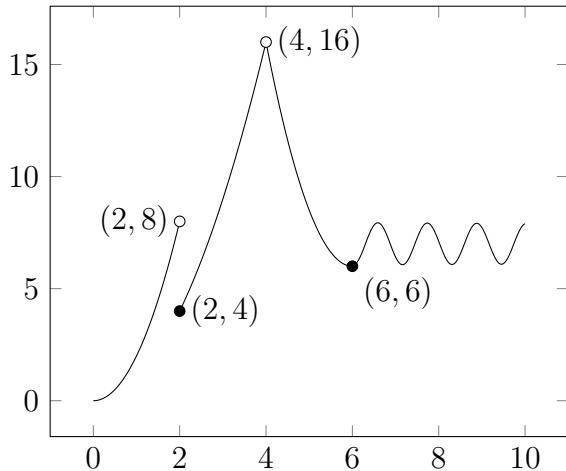


MA161 Quiz 6

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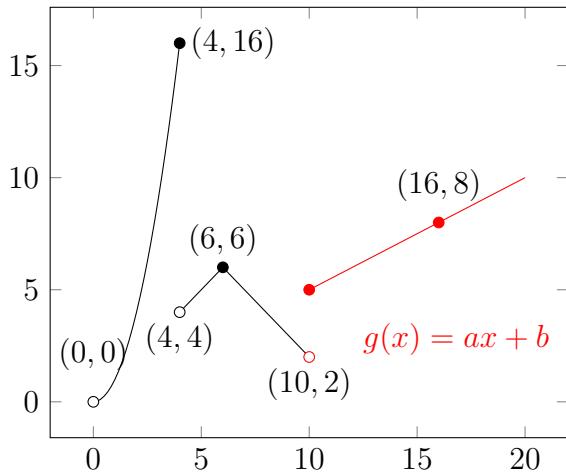
Problem 6.1. Suppose the graph of f is sketched below. Determine whether



- (a) f is continuous at $x = 2$;
- (b) f is continuous at $x = 4$;
- (c) f is continuous at $x = 6$.

Problem 6.2. If you stated that f was discontinuous for part (a), (b), or (c), classify the type of discontinuity, i.e., say whether it is a hole, a jump, or an vertical asymptote. Is f continuous from the left, from the right in parts (a), (b), or (c)?

Problem 6.3. Suppose the graph of g is sketched below. If we are told that g is of the form $ax + b$ for $x \geq 10$ and that $f(16) = 8$, what values must a and b take so that f is continuous at 10?



Problem 6.4. Consider the function

$$f(x) = \frac{x^2 - x - 20}{x - 5}.$$

If you would like to remove the discontinuity of f at $x = 5$, what value must you assign to $f(5)$?