

## Math 330 Reading Questions

Section 2.3

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NAME

*Answer the following questions as you read the textbook. This sheet will be collected at the beginning of class on Tuesday. Your answers will be graded for completeness.*

1. The method of **separation of variables** seeks solutions  $u(x, t)$  that can be written in what form?
2. When the method of separation of variables is applied to the heat equation, what two ordinary differential equations result? What types of ODEs are these?
3. When discussing the time-dependent ODE, what rationale does the text provide for the negative sign in  $-\lambda$ ?
4. How does the position-dependent ODE provide specific values for the constant  $\lambda$ ? What are these values called?

