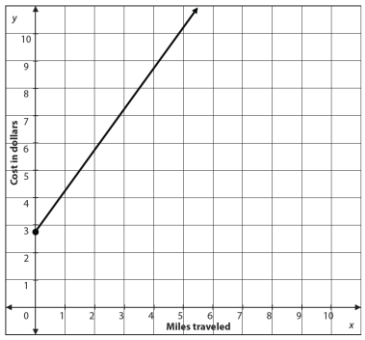
# Characteristics of Functions Practice

Name: _____ Date: _____

**1. A taxi company in Atlanta charges $2.75 per ride plus $1.50 for every mile driven. Write the equation for the line, and determine the key features of this function.**




Equation: _____ Discrete or Continuous: _____

Domain: _____ Range: _____

X Intercepts: _____ y- intercept: _____

Increasing or Decreasing: _____ Max or Min: _____

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**2. A pendulum swings to 90% of its height on each swing and starts at a height of 80 cm. The height of the pendulum in centimeters, y, is recorded after x number of swings. Write the equation, and determine the key features of this function.**

| Number of swings ($x$) | Height in cm ($y$) |
|---|---|
| 0 | 80 |
| 1 | 72 |
| 2 | 64.8 |
| 3 | 58.32 |
| 5 | 47.24 |
| 10 | 27.89 |
| 20 | 9.73 |
| 40 | 1.18 |
| 60 | 0.14 |
| 80 | 0.02 |

Equation: _____ Discrete or Continuous: _____

Domain: _____ Range: _____

X - Intercepts: _____ y- intercept: _____

Increasing or Decreasing: _____ Max or Min: _____

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**3. The cost of an air conditioner is $110. The cost to run the air conditioner is $0.35 per minute. Write the equation, and determine the key features of this function.**

| Minutes ($x$) | Cost in dollars ($f(x)$) |
|---|---|
| 0 | 110.00 |
| 30 | 120.50 |
| 60 | 131.00 |
| 90 | 141.50 |
| 120 | 152.00 |

Equation: _____ Discrete or Continuous: _____

Domain: _____ Range: _____

x- Intercepts: _____ y- intercept:_____

Increasing or Decreasing: _____ Max or Min: _____

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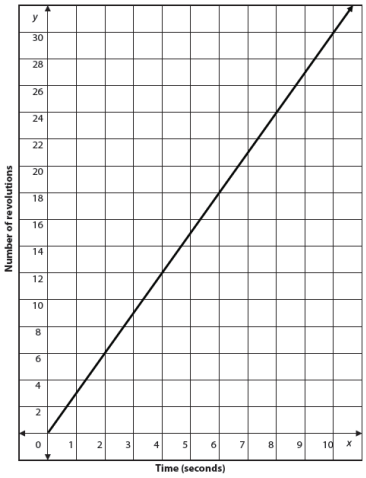
**4. A gear on a machine turns at a rate of 3 revolutions per second. Write the equation, and determine the key features of this function.**




Equation: _____ Discrete or Continuous: _____

Domain: _____ Range: _____

x- Intercepts: _____ y – intercept: _____

Increasing or Decreasing: _____ Max or Min: _____

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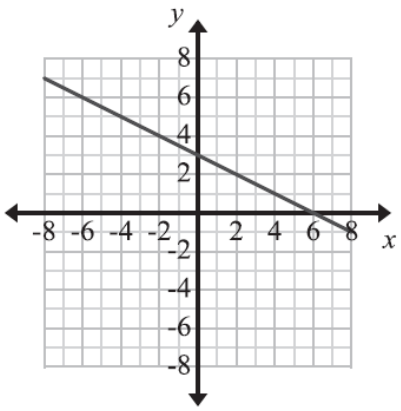
**5. Fill in the information for each graph.**

**a)**



Domain: _____

Range: _____

x-Intercepts: _____

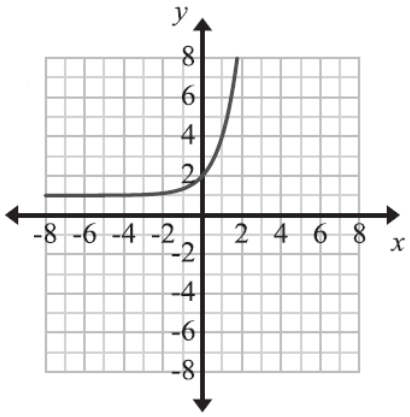
y- intercept:_____

Increasing / Decreasing: _____

Max or Min: _____

Asymptote:_____

**b)**



Domain: _____

Range: _____

x- Intercepts: _____

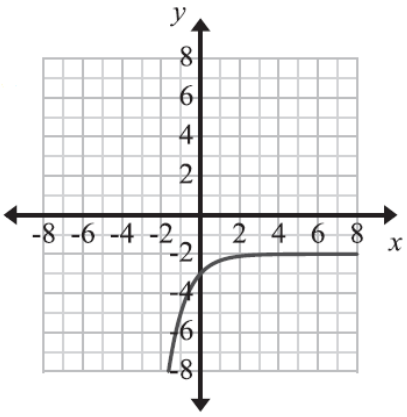
y – intercept:_____

Increasing / Decreasing: _____

Max or Min: _____

Asymptote:_____

**c)**



Domain: _____

Range: _____

x- Intercepts: _____

y- Intercept:_____

Increasing / Decreasing: ____

Max or Min: _____

Asymptote:_____