Exponential Decay - Independent Practice Worksheet

Complete all the problems.

- 1. Olivia purchased a music system worth \$18,000 in the year 2001. It loses its value by 6% per year. What is the value of the music system in 2003?
- 2. Matthew bought a laptop for \$34,000 in the year 2008. Its value depreciates by 4% per year. What is the value of laptop in 2011?
- 3. Ryan bought a bike for \$47,000 in the year 2002. Its value depreciates by 2% per year. What is the value of the bike in 2006?
- 4. Which of the following model is an exponential decay model?

a)
$$y = 12 (3.57)^t$$
 b) $y = 4 (1.21)^t$

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c)
$$y = 1 + 6t$$

d)
$$y = 7 (0.98)^t$$

- 5. Daisy purchased a food processor for \$23,000 in the year 2009. It loses its value by 7% per year. What is the price of the food processor in 2012?
- 6. Sarah bought a dish washer for \$6,000 in the year 2000. It depreciates by %2 per year. What is the value of the dish washer in 2001?
- 7. Which of the following model is an exponential decay model?

a)
$$y = 2,000 (0.07)^t$$
 b) $y = 4,000 (3.84)^t$

b)
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c)
$$y = 26t^2$$

d)
$$y = 1 + 17t$$

- 8. Adam bought a fish aquarium worth \$2,000 in the first week of the year. Its value depreciates by 3% per week. What will the value of fish aquarium after 5 weeks?
- 9. Which of the following model is an exponential decay model?

a)
$$y = 16t^2$$

b)
$$y = 9 (0.14)^t$$

c)
$$y = 24 (1.05)^t$$
 d) $y = 1 + 57t$

d)
$$y = 1 + 571$$

10. Which of the following model is an exponential decay model?

a)
$$y = 1 + 14t$$

b)
$$y = 34 (0.85)^t$$

c)
$$y = 3t^2$$

d)
$$y = 47 (1.85)^t$$