Name:\_\_**ANSWER KEY**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Accelerated Grade 6 Review for Assessment #12

***You will be able to use a calculator on this assessment.***

***SHOW YOUR WORK on all questions!***

1. Stephanie opens an account with $1,500 when she is 13 years old and is offered a simple interest rate of 3%. She wants to be able save $2,000 to buy a car by the time she turns 20 years old. Will she earn enough interest to make the purchase? **Use the formula I = prt to explain your answer.**

**I = 1500 \* 0.03 \* 7 = $315 earned in interest**

**$1500 + $315 = $1,815 total in account 🡪 No, he will not have enough.**

2. Emma has $600 in her savings account, and Lauren has $730 in her savings account. The interest rate is 1.5% and is not compounded. How much more money will Lauren have in her savings account at the end of 1 year than Emma? **Use the formula I = prt to explain your answer.**

**Emma: I = 600 \* 0.015 \* 1 = 9; 9 + 600 = $609
Lauren: I = 730 \* 0.015 \*1 = 10.95; 10.95 + 730 = $740.95**

**740.95 – 609 = $131.95; Lauren will have $131.95 more than Emma.**

****3. What percent of 26 is 29?

 **x = 111.5%**

4. A family goes out to dinner and receives a bill totaling $62.50.

**PART A:** If there is a 6% tax, how much is the bill for dinner and tax? Round your answer to the nearest cent. **Tax = 62.50 \* 0.06 = $3.75**

**Bill = 3.75 + 62.50 = $66.25**

**PART B:** If the family adds an 18% tip to the bill (after tax is added), what is the total cost for dinner, tax, and tip? Round your answer to the nearest cent.

**Tip = 66.25 \* 0.18 = $11.925**

**Total = 66.25 + 11.925 = 78.175 ≈ $78.18**

5. For each year that a gift card goes unused, the value of the card decreases by 15%. What is the value of a $50.00 gift card after 4 years? (Hint: think of this as a simple interest problem!)

**Decrease = 50 \* 0.15 \* 4 = $30 lost**

**Value = 50 – 30 = $20 remaining**

6. A pair of shoes that you want to buy just went on sale. The original price was $29 and the sale price is $18.85. What percent is the original price marked down?

**Markdown = 29 – 18.85 = $10.15**

** x = 35%**

7. A worker has to drive her car as part of her job. She receives money from her company to pay for the gas she uses. The table shows a proportional relationship between *y*, the amount of money that the worker receives, and *x*, the number of work-related miles driven.

|  |
| --- |
| **Mileage Rates** |
| **Distance Driven, x (miles)** | **Money Received, y (dollars)** |
| 15 | 7.20 |
| 20 | 9.60 |
| 30 | 14.40 |
| 35 | 16.80 |

 **Part A**: What is the unit rate in dollars per mile?

**$7.20 ÷ 15 = $0.48 per mile**

 **Part B**: The worker received $27.84 for work-related miles that she drove. Using your unit rate from Part A, determine the number of work-related miles she drove.

**$27.84 ÷ $0.48 per mile = 58 miles**

 **Part C**: One day, the worker drove a total of 82 work-related and personal miles. Using your answer from part B, what percent of her total miles driven were work-related that day?

** x = 70.7%**

8. A game that usually costs $14.99 is on sale for 20% off. How much does it cost? Round your answer to the nearest cent.

**Discount = 14.99 \* 0.20 = $2.998**

**Cost = 14.99 – 2.998 = 11.992 ≈ $11.99**

9. In a survey of 120 sixth graders and 130 seventh graders at NEMS, 15% of sixth graders were interested in participating in chorus while 19% of seventh graders were interested. Which grade level has more students interested in participating in chorus? Explain how you determined your answer.

**6th Graders: 120 \* 0.15 = 18 students**

**7th Graders: 130 \* 0.19 = 24.7 ≈ 25 students**

**More students in 7th are interested in participating in chorus.**

10. The selling price of a phone this year is $399. The price this year is 4% more than the selling price of each phone last year. What was the selling price of the phone last year? **Explain your answer**.

** x = $383.65**

****11. Is the percent of increase from 85 to 90 the same as the percent of decrease from 90 to 85? **Justify your answer**.

**Percent Increase from 85 to 90:**  **; x = 5.9%**

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**Percent Decrease from 90 to 85: ; x = 5.6%**

**No, they are not the same.**