Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CFS for top quality work**

* + Problem is annotated for meaning (**operations** and **signs of numbers**)
  + Model is drawn representing the situation
  + Expression is written from the model
  + Expression is **evaluated** and solution is *represented in the context of the problem*

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

UNIT 2 LESSON 11

**AIM**: SWBAT apply properties of operations to multiply and divide rational numbers to solve multi-step (3-5 steps) mathematical and real world problems involving all operations.

In my own words this means I will be able to…

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**THINK ABOUT IT!**

The temperature for Bridgeport, CT this week will fluctuate a lot according to the weather channel. It will start at 6 degrees and drop 7 degrees on Monday, rise 2 degrees on Tuesday, decrease 12 degrees on Wednesday, and decrease another 7 degrees on Thursday. They predict that the temperature on Friday will be -10 degrees. What is the predicted temperature change between Thursday and Friday?

Key Point

|  |
| --- |
| Mathematicians use \_\_\_\_\_\_\_\_\_\_\_\_\_ to make sense of and \_\_\_\_\_\_\_\_\_\_\_ real-world problems |

**Interaction with New Material**

Ex. 1) Mr. Roble is buying a lot of music on iTunes this week. On Monday, his bank account was at $30. On Tuesday, he bought 7 songs at $1.99 each. On Wednesday, he deposited $10 into his account. On Thursday, he bought 4 albums for $7.99 each. On Friday he received a check from work and deposited some of the check to get his account balance back to 0.

How much of his check would he have to deposit to get his account back to $0?

What was the average change in his account over the four days?

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**PARTNER PRACTICE**

|  |
| --- |
| *Bachelor Level* |

1. For a science experiment, Shania recorded the temperature outside for five days. On the first day, the temperature was 8˚F. The next day, the temperature dropped 4 degrees. Following that, the temperature increased by 2 degrees, then dropped by 5 degrees, and finally dropped by 5 degrees again. What was the temperature on the final day

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|  |
| --- |
| *Master Level* |

The table below shows the change in music sales as a percent from 1997 to 2006.

|  |  |  |
| --- | --- | --- |
| **Style of Music** | **Percent of Music sold in 1997** | **Percent Change from 1997 to 2006** |
| **Rock** | 36 | 1.5 |
| **Hip Hop** | 31 | - 2 |
| **Pop** | 19 | 0.75 |
| **Country** | 14 | - 1.25 |

1. What was the average percent change as of 2006 for all four styles of music?

**INDEPENDENT PRACTICE**

|  |
| --- |
| *Bachelor Level* |

1. The price of a stock fell $1.50 each day for two weeks (stocks only trade 5 days per week). The original price of the stock was $51. What was the price of the stock after 2 weeks?

**CFS for top quality work**

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|  |
| --- |
| *Master Level* |

1. Every day for five days, Marco withdraws $220 from his bank account. If he wants to replenish the money that he withdrew from his bank account by depositing the same amount into his account each day over 4 days, how much money should he deposit per day?
2. Martin, Sarah and Michael will share the cost of a rental car for the week.

* Martin will pay 0.35 of the cost
* Sarah will pay ½ of the cost
* Michael will pay the rest of the cost

If the rental costs $500, how much will each person pay?

1. The table shows the elevations of geographic areas in relation to sea level. What is the average elevation of the four geographic areas?

|  |  |
| --- | --- |
| **Area** | **Elevation** |
| Dead Sea | -418 |
| Death Valley | -86 |
| Lake Eyre | -15 |
| Salton Sea | -66 |

|  |
| --- |
| *PhD Level* |

1. The highest point in California is Mount Whitney, with an elevation of 14,494 feet. The lowest point is Death Valley with an elevation of -282 feet. If a hiker hikes from Death Valley to the top of Mount Whitney at a constant rate of 500 feet per day, how many days will it take the hiker to reach the top of the mountain?
2. The daily closing prices for a company’s stocks are shown. Use the table to answer the following two questions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **May 3** | **May 4** | **May 5** | **May 6** | **May 7** |
| **Closing Price** | $33.30 | $30.59 | $31.04 | $31.97 | $30.15 |
| **Change** (from previous day) | ------ |  |  |  |  |

1. Find the change in the closing price since the previous day and represent the value as a positive or negative rational number to show an increase or decrease in price.
2. What was the average change in the closing price for the week?

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**EXIT TICKET**

|  |  |  |  |
| --- | --- | --- | --- |
| Self-assessment | I mastered the learning objective today. | I am almost there. | Need more practice and feedback. |
| Teacher feedback | You mastered the learning objective today. | You are almost there. | You need more practice and feedback. |

At the start of the week, Apple’s stock price was $32. That week, the value of the stock gained $1.25, and then lost $5.50, lost another $2, gained $3.25 and lost $1.75.

Part A: What was the value of the stock at the end of the week?

Part B: What was the **average** **change** in the value of the stock per day?