**Adding Rational #’s** **Subtracting Rational #’s**-Same Sign = ADD and Keep the Sign - Minus sign and negative together = Positive Sign
- Different Sign = SUBTRACT and take - Think of the minus sign as a negative sign
 the larger #’s Sign - Line up vertically

**Level 2**

|  |  |
| --- | --- |
| 1. $-232+(128)$
 | 1. $63+(-63)$
 |
| 1. $-42+24$
 | 1. $-12+(-33)$
 |
| 1. $$
 | 1. $$
 |
| 1. $-980-3256$
 | 1. $240-610$
 |
| 1. $76-(-77)$
 | 1. $-$
 |
| 1. $-38$
 | 1. $225-335$
 |

1. Use the number line to show the following problem: $-3+6+(-9)$



**Adding Rational #’s** **Subtracting Rational #’s**-Same Sign = ADD and Keep the Sign - Minus sign and negative together = Positive Sign
- Different Sign = SUBTRACT and take - Think of the minus sign as a negative sign
 the larger #’s Sign - Line up vertically

**Level 3**

|  |  |
| --- | --- |
| 1. $-32.4+(-32)$
 | 1. $-22+36.43$
 |
| 1. $9.9+$
 | 1. $-47.91-(-68.783)$
 |
| 1. $$
 | 1. $-\frac{5}{6}+(-\frac{2}{5})$
 |
| 1. $-\frac{7}{9}-\frac{2}{3}$
 | 1. $\frac{5}{2}-\frac{7}{5}$
 |

1. Use the number line to show the following problem: $-3.5+\left(-3.5\right)+10.5$

**Adding Rational #’s** **Subtracting Rational #’s**-Same Sign = ADD and Keep the Sign - Minus sign and negative together = Positive Sign
- Different Sign = SUBTRACT and take - Think of the minus sign as a negative sign
 the larger #’s Sign - Line up vertically

**Level 3**

|  |  |
| --- | --- |
| 1. $-2\frac{2}{3}+(-3\frac{1}{5})$
 | 1. $-2\frac{1}{2}-3\frac{2}{3}$
 |
| 1. $1\frac{1}{8}-$
 | 1. $4\frac{1}{9}+$
 |
| 1. $$
 | 1. $-5+1\frac{3}{4}$
 |
| 1. $-6+(-3\frac{4}{7})$
 | 1. $-2\frac{2}{5}-(-5)$
 |

1. Use the number line to show the following problem: $-6\frac{3}{4}+\left(-2\frac{1}{4}\right)+11\frac{2}{4}$

**Adding Rational #’s** **Subtracting Rational #’s**-Same Sign = ADD and Keep the Sign - Minus sign and negative together = Positive Sign
- Different Sign = SUBTRACT and take - Think of the minus sign as a negative sign
 the larger #’s Sign - Line up vertically

**Level 4**

|  |  |
| --- | --- |
| 1. $-9-25+(32)$
 | 1. $-23+(-20)-(-44)$
 |
| 1. $33-52+(-23)$
 | 1. $-15--41$
 |
| 1. $$
 | 1. $-4.25-\left(-8.8\right)-12$
 |

**Adding Rational #’s** **Subtracting Rational #’s**-Same Sign = ADD and Keep the Sign - Minus sign and negative together = Positive Sign
- Different Sign = SUBTRACT and take - Think of the minus sign as a negative sign
 the larger #’s Sign - Line up vertically

**Level 4**Hint: *Use properties of ADDITION to simplify the problem*

|  |  |
| --- | --- |
| 1. $-\frac{3}{4}+\left(-\frac{1}{6}\right)-\frac{2}{3}$
 | 1. $-1\frac{1}{2}-\frac{3}{5}-\frac{1}{4}$
 |
| 1. $-10\frac{1}{5}-+3.4$
 | 1. $4.75+$
 |
| 1. $$
 | 1. $-2.4- \\_\\_\\_\\_\\_\\_\\_$ = $0$
 |
| 1. $-4+\left(-3\frac{4}{5}\right)-2.5$
 | 1. $-2\frac{2}{5}-\left(-0.75\right)+\frac{1}{6}$
 |

**Multiplying Rational #’s** **Dividing Rational #’s**-Same Sign = Positive Answer - Same Rules as Multiplying
- Different Sign = Negative Answer - Use *Multiplicative Inverse Rule* (Keep Change Flip)
- Odd Amount of Negatives = Negative Answer
- Even Amount of Negatives = Positive Answer

**Level 2**

|  |  |
| --- | --- |
| 1. $-32×(48)$
 | 1. $-22×(-54)$
 |
| 1. $-66÷3$
 | 1. $\frac{-246}{-2}$
 |
| 1. $$
 | 1. $$
 |
| 1. ${-121}/{11}$
 | 1. $^{-54}/\_{-3}$
 |
| 1. $36÷(-6)$
 | 1. $(2345)(-8)$
 |
| 1. $\left(-35\right)×$
 | 1. $\frac{64}{-4}$
 |

**Multiplying Rational #’s** **Dividing Rational #’s**-Same Sign = Positive Answer - Same Rules as Multiplying
- Different Sign = Negative Answer - Use *Multiplicative Inverse Rule* (Keep Change Flip)
- Odd Amount of Negatives = Negative Answer
- Even Amount of Negatives = Positive Answer

**Level 3**

|  |  |
| --- | --- |
| 1. $\left(-3\frac{2}{3}\right)(-1\frac{4}{5})$
 | 1. $\frac{-1\frac{1}{3}}{1\frac{3}{7}}$
 |
| 1. $\frac{12}{15}×(-\frac{18}{21} )$
 | 1. $\frac{8}{-10}÷$
 |
| 1. $($
 | 1. $-12.53×5$
 |
| 1. $-12.57÷3$
 | 1. $\frac{-3.83}{-0.02}$
 |

**Fractions to Decimals** **Decimals to Fractions**- Bottom Out - Largest place value
- Divide (Don’t forget decimal placement) - Tenths, hundredths, thousandths, etc.

**Absolute Value**- Solve problem inside absolute value lines
- Answer is turned positive at end of solving
Represents a distance

**Level 3**

|  |  |
| --- | --- |
| 1. Simplify: $\left|-39-(-18)\right|$
 | 1. Evaluate: $\left|-12×\right|$
 |
| 1. Convert $\frac{3}{8}$ into a decimal.
 | 1. Convert $\frac{5}{6}$ into a decimal.
 |
| 1. Convert 12.45 into a fraction in simplest form.
 | 1. Convert 8.0956 into a fraction in simplest form.
 |
| 1. Solve: $\left|-12-36\right|$
 | 1. Evaluate: $\left|\frac{-158}{-2}\right|$
 |

**Multiplying Rational #’s** **Dividing Rational #’s**-Same Sign = Positive Answer - Same Rules as Multiplying
- Different Sign = Negative Answer - Use *Multiplicative Inverse Rule* (Keep Change Flip)
- Odd Amount of Negatives = Negative Answer
- Even Amount of Negatives = Positive Answer

**Level 4**

|  |  |
| --- | --- |
| 1. Solve using the multiplication properties.

$$-12\left(-3\frac{1}{6}\right)$$ | 1. Solve using the multiplication properties.

$-3×\frac{-1}{2}×\frac{3}{5}÷\frac{1}{-3}×4÷\frac{3}{2}$  |
| 1. Solve using the multiplication properties.

$$-1\frac{1}{5}××0.5÷2\frac{1}{2}$$ | 1. Solve using the multiplication properties.

$3.5÷\frac{-2}{3}×\left(-2\right)÷$  |
| 1. $$
 | 1. $\frac{2}{5}÷ \\_\\_\\_\\_\\_\\_\\_$ = $1$
 |
| 1. Solve using the multiplication properties.

$$\left(-3\frac{4}{5}\right)×3$$ | 1. Solve using the multiplication properties.

$$\frac{1}{2}\left(6\frac{5}{6}\right)$$ |

Which situation could be solved using the equation -4 + 4 = 0?

1. Terrance has $4 in his lunch account. He deposits $4 in his account when he gets to school in the morning.
2. Juanita recorded a temperature of -4oF at 8:00 A.M. An hour later, the temperature increased 4o.
3. Griffin places 4 counters, each representing -1, in a group. He created a total of 4 identical groups.
4. Melinda walks 4 blocks towards her home and stops to get a snack. She walks the remaining 4 blocks home.

The sum of three numbers is -44.84. One of the numbers is 24.6. The other two numbers are equal to each other. What is the value of each of the other two numbers?

1. 4.36
2. -10.12
3. -34.72
4. -40.48

The elevation of the surface of the Dead Sea is -424.3 meters. In 2005, the height of Mt. Everest was 8,844.43 meters. How much higher was Mt. Everest?

1. -9,268.73 m
2. -8,420.13 m
3. 8,420.13 m
4. 9,268.73 m

A company’s stock begins the week with a price of $43.85 per share. The price changes by $2.70 each day for 2 days. Then the price changes by -$1.10 each day for 2 days. On the last day, the price drops $4.45. What is the price per share of the company’s stock after those five days.

1. $41.00
2. $42.60
3. $45.10
4. $55.90

Which expression has the same value as $-\frac{3}{2}-\left(2-\frac{3}{8}\right)+\frac{3}{2}$ ?

1. $\left(\frac{3}{2}-\frac{3}{2}\right)-2+\frac{3}{8}$
2. $\left(\frac{3}{2}-\frac{3}{2}\right)+\left(2+\frac{3}{8}\right)$
3. $-\left(\frac{3}{2}+\frac{3}{2}\right)-\left(2-\frac{3}{8}\right)$
4. $\left(-\frac{3}{2}+\frac{3}{2}\right)+\left(2+\frac{3}{8}\right)$

What is the value of $\frac{-3}{4}-\left(\frac{3}{-8}\right)$ ?

1. $-1\frac{1}{8}$
2. $-\frac{3}{8}$
3. $\frac{3}{8}$
4. $1\frac{1}{8}$

Bethany needs to cut a board into 5 equal sections. If the board is 17.55 feet long, how long will each section be?

1. 3.51 ft
2. 4.55 ft
3. 22.55 ft
4. 87.75 ft

Brett took a test that gave 2 points for each correct response and $-\frac{1}{2}$ point for each incorrect response. He answered 35 questions correctly and 15 questions incorrectly, so his total number of points was $35\left(2\right)+\left[-\frac{1}{2}(15)\right]$. What is another way to write Brett’s total number of points on the test?

1. $15\left(2\right)+ \left[-\frac{1}{2}(35)\right]$
2. $15\left(2\right)+\frac{1}{2}\left(35\right)$
3. $35\left(2\right)-\left[-\frac{1}{2}\left(15\right)\right]$
4. $35\left(2\right)-\frac{1}{2}(15)$

Peter made two transactions today at his bank. What can the sum -47.27 + 598 = 550.73 mean in terms of Peter’s bank account?

1. Peter deposited $47.27 and withdrew $598, decreasing his balance by $550.73.
2. Peter deposited $47.27 and withdrew $598. Increasing his balance by $550.73.
3. Peter withdrew $47.27 and deposited $598. Decreasing his balance by $550.73.
4. Peter withdrew $47.27 and deposited $598. Increasing his balance by $550.73.

Shamay spent $200 at a thrift shop. She bought three rings for $21 each and spent the rest on 4 equally priced bracelets. How much did each bracelet cost?

1. $65.75
2. $50.00
3. $34.25
4. $28.57

Raul has 4 identical baseball cards of his favorite player. According to his monthly price guide, the change in value of one of the cards from the previous month was $-0.12. What was the combined change in value of the 4 cards?

1. -$0.16
2. -$0.25
3. -$0.48
4. -$0.84

The outside temperature was 4oC. For the next 6 hours the temperature changed at a mean rate of -0.8oC per hour. Then the temperature changed by +0.3oC per hour for the next 2 hours. What was the final temperature?

1. 9.4oC
2. 8.2oC
3. -0.2oC
4. -0.8oC

What is the value of $-\frac{1}{6}+ \frac{2}{3}\left(9-\frac{3}{4}\right)-\frac{1}{2}$?

1. $\frac{62}{12}$
2. $\frac{58}{12}$
3. $\frac{55}{12}$
4. $\frac{3}{12}$

What is the value of $\frac{5}{8}- \frac{5}{12}\left(3-\frac{1}{4}\right)+\frac{2}{3}$?

1. $-26\frac{5}{24}$
2. $\frac{7}{48}$
3. $1\frac{1}{24}$
4. $1\frac{23}{96}$

Which of the following situations could be represented by the expression -3 + 3?

1. Nancy owes $3 and then charges another $3.
2. Jason pays $3 on the $3 he owes in fines.
3. There is a change in temperature from -3oF to 3oF.
4. A toy car travels at a rate of 3 meters per minute for 3 minutes.

Which expression is equivalent to 14 – 9?

1. -14 + 9
2. -9 – 14
3. 9 – (-14)
4. 14 + (-9)

A butcher is dividing a round of beef into 3 equal-sized roasts. If each roast weighs 7.9 pounds, and there are 1.4 pounds of beef left over, how much did the round of beef weigh?

1. 19.5 lbs
2. 22.3 lbs
3. 25.1 lbs
4. 27.9 lbs

Javier is scuba diving while on vacation. Yesterday, he dove to -13.74 feet. Today, he plans to go 4 times as deep. How far is Javier planning to dive today?

1. -54.96 ft
2. -17.74 ft
3. -9.74 ft
4. -3.44 ft

Ann opened a savings account with an initial deposit of $250. Which combination will result in a zero balance in Ann’s account?

1. Deposit $20 in the first week and withdraw $270 in the second week
2. Deposit $270 in the first week and withdraw $20 in the second week
3. Deposit $20 in the first week and withdraw $250 in the second week
4. Deposit $250 in the first week and withdraw $20 in the second week

On a winter morning, the temperature before sunrise was -11oF. The temperature then rose by ½ degree each hour for 7 hours before dropping by 2 ¼ degrees each hour for 3 hours. What was the temperature, in degrees Fahrenheit, after 10 hours?

1. $-1\frac{1}{4}$
2. $-10\frac{1}{4}$
3. $-14\frac{1}{4}$
4. $-21\frac{1}{4}$