## End of Unit TEST

## Adding and Subtracting Rational Numbers

Draw both a model using two-color counters and a model using a number line to represent each number sentence. Then, determine the difference. (3 points each)

| \# | Problem | Chip Model | Number Line Model |
| :---: | :---: | :---: | :---: |
| 1) | $-8-(-5)=$ |  |  |
| 2) | $-4-9=$ |  |  |
| 3) | $2-(-8)=$ |  |  |
| 4) | 3-12 = |  |  |

Determine each difference without using a model (1 point each):

| 5) $7-(-13)=$ | 10) $10-(-1)=$ |
| :--- | :--- |
| 6$)-16-3=$ | $11)-9-7=$ |
| 7$)-1-(-2)=$ | $12)-5-(-5)=$ |
| 8$) 19-(-19)=$ | $13)-8-(-8)=$ |
| 9$) 40-(-20)=$ | $14)-800-(-300)=$ |

15) The table gives the lowest temperatures ever recorded in five U.S. cities. Use this table to answer each question:

| Lowest Recorded Temperatures ( ${ }^{\circ}$ F) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Honolulu, HI | Huron, SD | Mobile, AL | Norfolk, VA | St. Louis, MO |
| 53 | -41 | 3 | -3 | -18 |

a) What is the difference between the greatest temperature listed and the least temperature listed? Answer: $\qquad$
b) How much greater was Norfolk's lowest temperature than St. Louis's lowest temperature? Answer: $\qquad$

Draw both a model using two-color counters and a model using a number line to represent each number sentence. Then, determine the sum. (3 points each)

| \# | Problem | Chip Model | Number Line Model |
| :---: | :---: | :---: | :---: |
| 16) | $-5+8=$ |  |  |
| 17) | $5+(-8)=$ |  |  |
| 18) | $-5+(-8)=$ |  |  |
| 19) | $5+8=$ |  |  |

Determine each sum without using a model (1 point each):

| 20) $45+(-27)=$ | $25) 32+(-98)=$ |
| :--- | :--- |
| 21) $-153+74=$ | $26)-63+(-41)=$ |
| 22) $527+(-289)$ | $27)-32+98=$ |
| 23) $-47+(-95)=$ | $28)-51+134=$ |
| 24$)-3+4=$ | $29)-3+(-4)=$ |

30) The average daily temperature in Denton went from $-8^{\circ} \mathrm{F}$ in January to $43^{\circ} \mathrm{F}$ in March. What was the change in average daily temperature from January to March? (Multiple Choice)
a. The average temperature rose $51^{\circ} \mathrm{F}$.
b. The average temperature rose $35^{\circ} \mathrm{F}$.
c. The average temperature fell $51^{\circ} \mathrm{F}$.
d. The average temperature fell $35^{\circ} \mathrm{F}$.

