$\qquad$ Date $\qquad$ Period $\qquad$
Part A: Identifying Functions [8.F.1]

1. Determine if each relation represents a function. Justify your reasoning for each.
A) $(-10,3)$
(-10, -7)
(-10, -10)
$(-10,-15)$
B) $y=2 x-4$
C)

D)

| $\boldsymbol{x}$ | $\boldsymbol{y}$ |
| :---: | :---: |
| -2 | 1 |
| -1 | 1 |
| 0 | 3 |
| 1 | -1 |

2. Carol claims that the indicated relation is a function but is not a linear function.

Select the statement(s) that support Carol's claims.
A) For each value of $x$, there exists at most one value of $y$.
B) The function does not form a straight line.
C) The function only increases.
D) The function does not contain the origin.


Part B: Graphing \& Describing Functions [8.F.5]
3. Select all the points contained by the function $y=2 x-12$.
A) $(2,-12)$
B) $(6,-12)$
C) $(12,-12)$
D) $(6,0)$
4. A linear relationship between cups of flour, $x$, and cookies baked, $y$, is modeled below.

| Cups of Flour, $\boldsymbol{x}$ | Cookies Baked, $\boldsymbol{y}$ |
| :---: | :---: |
| 2 | 24 |
| 5 | 60 |
| 6 | 72 |
| 10 | 120 |

Determine the rate of change of the number of cookies baked per cup of flour. Justify your reasoning.
5. The graph shows temperature at the beach with respect to time.

Determine whether each statement is true or false.
A) The temperature at the beach increased from 6 am to 8 am .

True False
B) The temperature at the beach was constant from 7am to 10am.

True False

C) The temperature at the beach increased 30 degrees overall between 6 am and 11 am .

True False
D) The temperature at the beach increased at a linear rate between 6 am and 11 am .

True False

Part C: Constructing Functions [8.F.4]
6. Write the equation of the linear function shown.


