

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

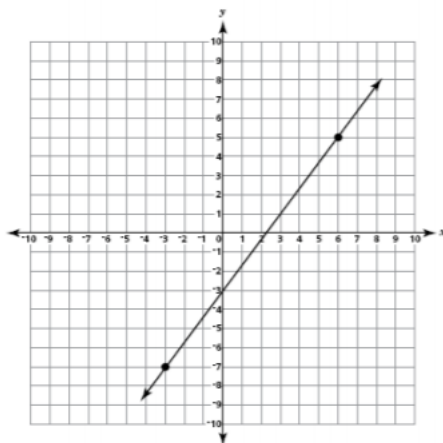
Date: \_\_\_\_\_

Ms. Streffacio

Class: \_\_\_\_\_

### 8.F.5

1. Look at the graph below.



Which equation represents the line in the graph?

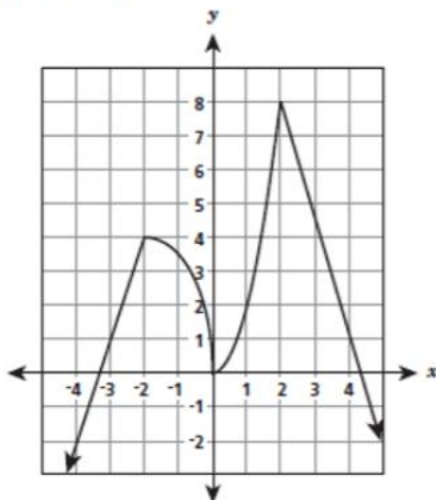
A.  $y = \frac{3}{4}x + 3$

C.  $y = \frac{4}{3}x + 3$

B.  $y = \frac{3}{4}x - 3$

D.  $y = \frac{4}{3}x - 3$

2. The graph of a function is shown below.



For which interval of  $x$  is the function decreasing and nonlinear?

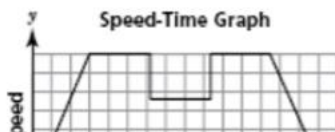
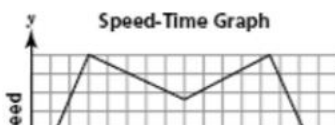
A. between -4 and -2

C. between 0 and 2

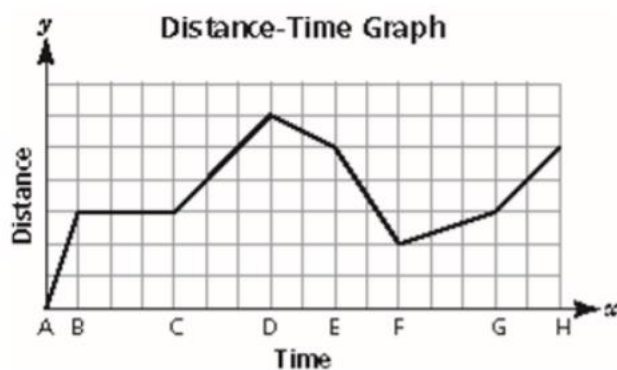
B. between -2 and 0

D. between 2 and 4

3. A train accelerated to its maximum speed. It stayed at this speed for some time, and then began to slow down, before suddenly accelerating once again to its maximum speed. It again stayed at its maximum speed for some time, before slowing down and coming to a stop. Which graph shows the relationship between time and the train's speed?



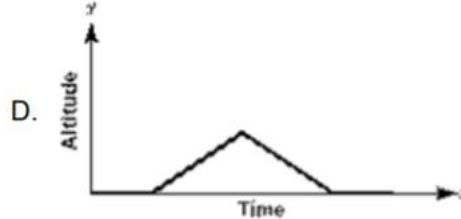
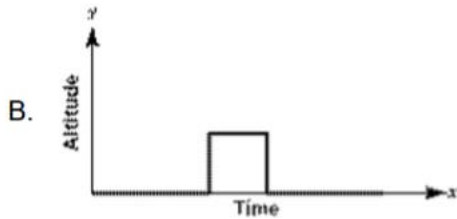
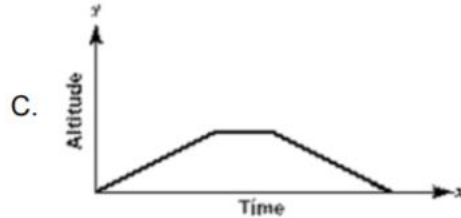
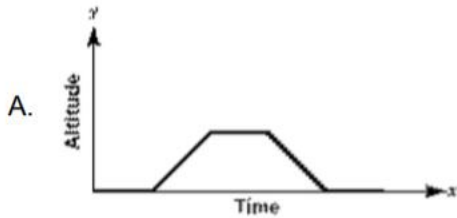
4. In the graph below, time is shown on the  $x$ -axis and distance is shown on the  $y$ -axis. The slope of a segment represents the speed during that interval.



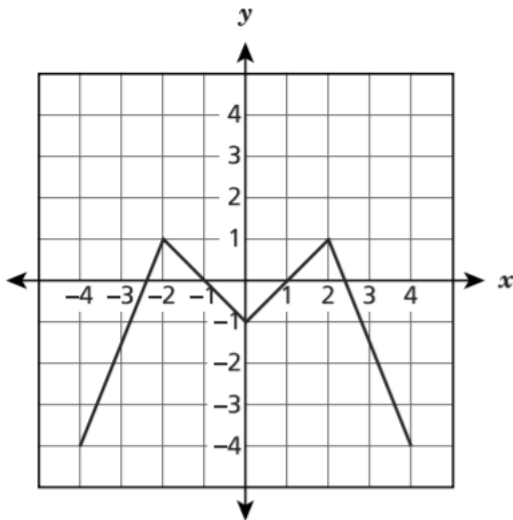
Which statement is **true**?

- A. The object is moving closer to its starting position most quickly between A and B.
- B. The object is moving closer to its starting position most quickly between E and F.
- C. The object is moving farther away from its starting position most quickly between C and D.
- D. The object is moving farther away from its starting position most quickly between D and E.

5. A plane leaves the gate and taxis on the runway. Then, the plane ascends to its flying altitude. The plane stays at this altitude for some time. Then, the plane descends to the runway. The plane lands and taxis to the gate. Which graph shows the altitude of the airplane as it travels in time?



6. A function of  $x$  is shown on the coordinate plane.



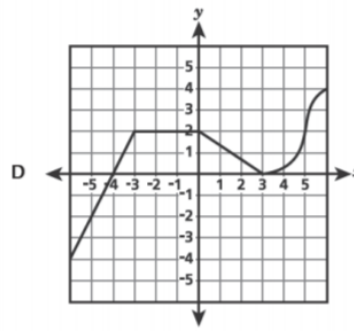
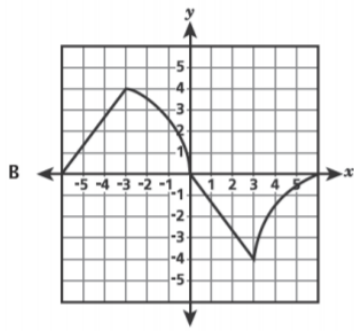
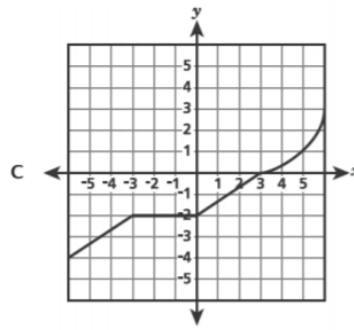
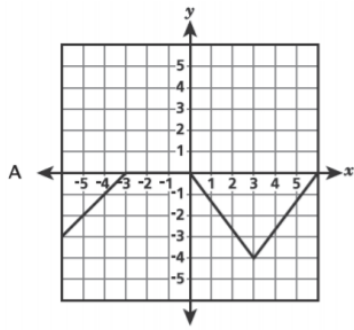
Over which intervals is the function increasing?

- A  $-4 < x < -2$  and  $-1 < x < 1$       C  $-2 < x < 0$  and  $2 < x < 4$   
 B  $-4 < x < -2$  and  $0 < x < 2$       D  $-2 < x < -1$  and  $2 < x < 4$

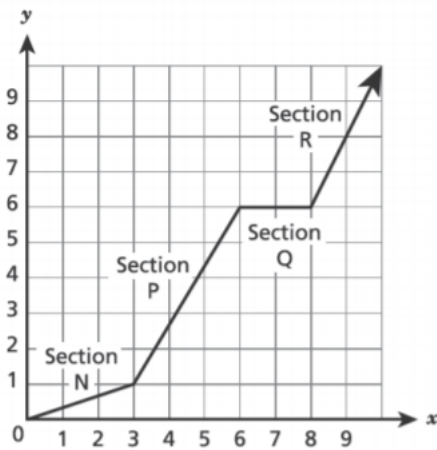
7. A function has the following properties:

- It is increasing and linear when the value of  $x$  is between  $-5$  and  $-3$ .
- It remains constant when the value of  $x$  is between  $-3$  and  $0$ .
- It is decreasing and linear when the value of  $x$  is between  $0$  and  $3$ .
- It is increasing and nonlinear when the value of  $x$  is between  $3$  and  $5$ .

Which graph best represents this function?



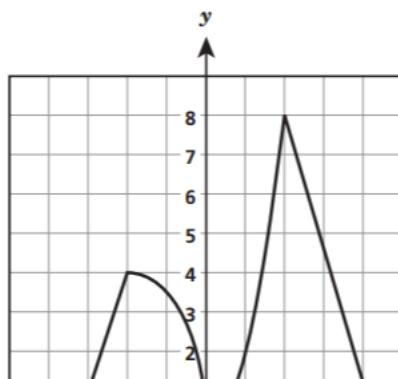
8. The graph of a function is shown below.



Which statement is **true** about a section of the graph?

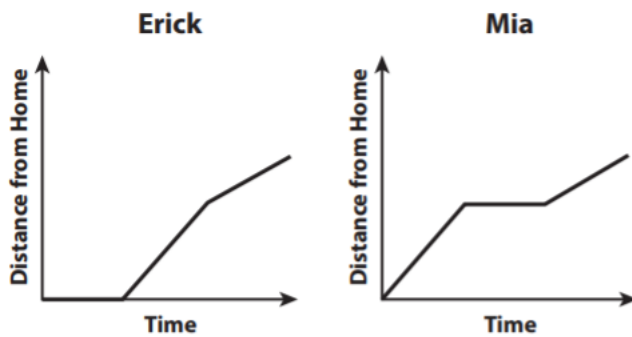
- A In Section N, the function is linear and decreasing.
- B In Section P, the function is linear and increasing.

9. The graph of a function is shown below.



- A** between  $-4$  and  $-2$
- B** between  $-2$  and  $0$
- C** between  $0$  and  $2$
- D** between  $2$  and  $4$

10. Erick and Mia live the same distance from the park and decide to meet at the park one afternoon. The graphs show their distances from home over the same 30-minute period as they walked to the park. Each section of each graph represents 10 minutes.



Which of these statements are true?

Choose all that apply.

- A** Mia returned to her house after 10 minutes.
- B** Mia left her house 10 minutes before Erick left his house.
- C** It took Erick only 10 minutes to walk to the park.
- D** Erick and Mia arrived at the park at the same time.
- E** Erick walked the same distance as Mia during the last 10 minutes.