

Lesson 10 Practice Problems

1. The cost for an upcoming field trip is \$30 per student. The cost of the field trip C , in dollars, is a function of the number of students x .

Select all the possible outputs for the function defined by $C(x) = 30x$.

A. 20

B. 30

C. 50

D. 90

E. 100

2. A rectangle has an area of 24 cm^2 . Function f gives the length of the rectangle, in centimeters, when the width is w cm.

Determine if each value, in centimeters, is a possible input of the function.

3

0.5

48

-6

0

3. Select all the possible input-output pairs for the function $y = x^3$.

A. $(-1, -1)$

B. $(-2, 8)$

C. $(3, 9)$

D. $(\frac{1}{2}, \frac{1}{8})$

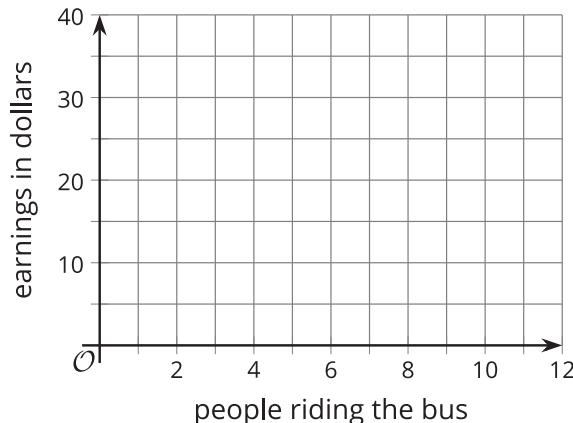
E. $(4, 64)$

F. $(1, -1)$

4. A small bus charges \$3.50 per person for a ride from the train station to a concert.
 The bus will run if at least 3 people take it, and it cannot fit more than 10 people.

Function B gives the amount of money that the bus operator earns when n people ride the bus.

- Identify all numbers that make sense as inputs and outputs for this function.
- Sketch a graph of B .



5. Two functions are defined by the equations $f(x) = 5 - 0.2x$ and $g(x) = 0.2(x + 5)$.

Select **all** statements that are true about the functions.

- A. $f(3) > 0$
- B. $f(3) > 5$
- C. $g(-1) = 0.8$
- D. $g(-1) < 0$
- E. $f(0) = g(0)$

(From Unit 4, Lesson 5.)

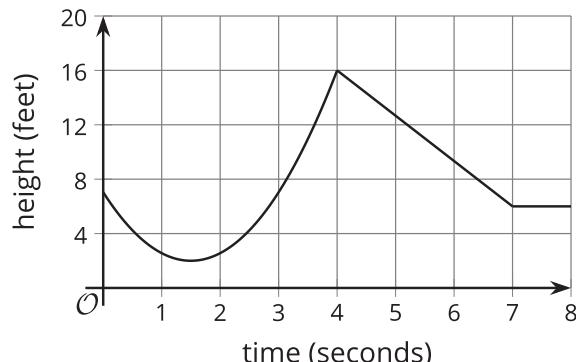
6. The graph of function f passes through the coordinate points $(0, 3)$ and $(4, 6)$.

Use function notation to write the information each point gives us about function f .

(From Unit 4, Lesson 3.)

7. Match each feature of the graph with the corresponding coordinate point.

If the feature does not exist, choose "none".



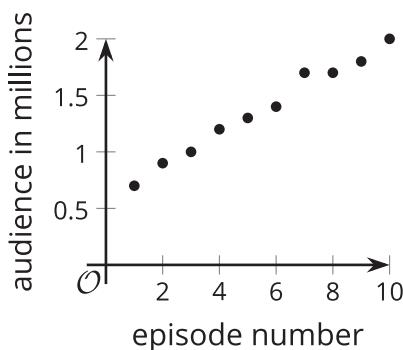
- A. maximum
- B. minimum
- C. vertical intercept
- D. horizontal intercept

- 1. (0, 7)
- 2. (1.5, 2)
- 3. (4, 16)
- 4. none

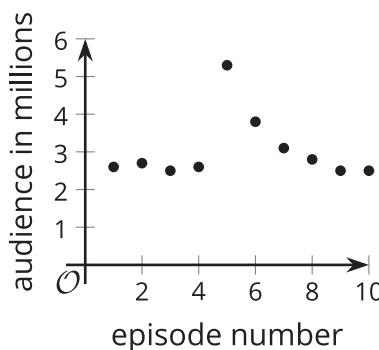
(From Unit 4, Lesson 6.)

8. The graphs show the audience, in millions, of two TV shows as a function of the episode number.

Show A



Show C



For each show, pick two episode numbers between which the function has a negative average rate of change, if possible. Estimate the average rate of change, or explain why it is not possible.

(From Unit 4, Lesson 9.)