

Assessment Title: Grade 7 Module 1 Mid-Module Assessment

1 of 11

Mary is saving money for college expenses. She saves the same amount each month. The table shows the amount of money Mary has saved after 4 and 7 months.

Number of Months	Total Amount of Savings (dollars)
4	80
7	140

Which statements about this situation are true and support the relationship as being proportional? Select all that apply.

- A constant of \$20 can be multiplied by the number of months to find the amount in the account.
- A constant of \$20 can be added to the number of months to find the amount in the account.
- The values of the ratios in the table, total amount of savings to number of months, are equivalent.
- If graphed on the coordinate plane, the values in the table fall on a line that passes through the origin.
- The table of values shows that \$60 is added to the account each month.

Select all tables that represent a proportional relationship.

Number of Peaches	Cost (dollars)
3	3.75
7	8.75
11	13.75

Number of Hours	Cost (dollars)
2	100
4	150
6	200

Number of Hours	Earnings (dollars)
6	54
8	72
11	114



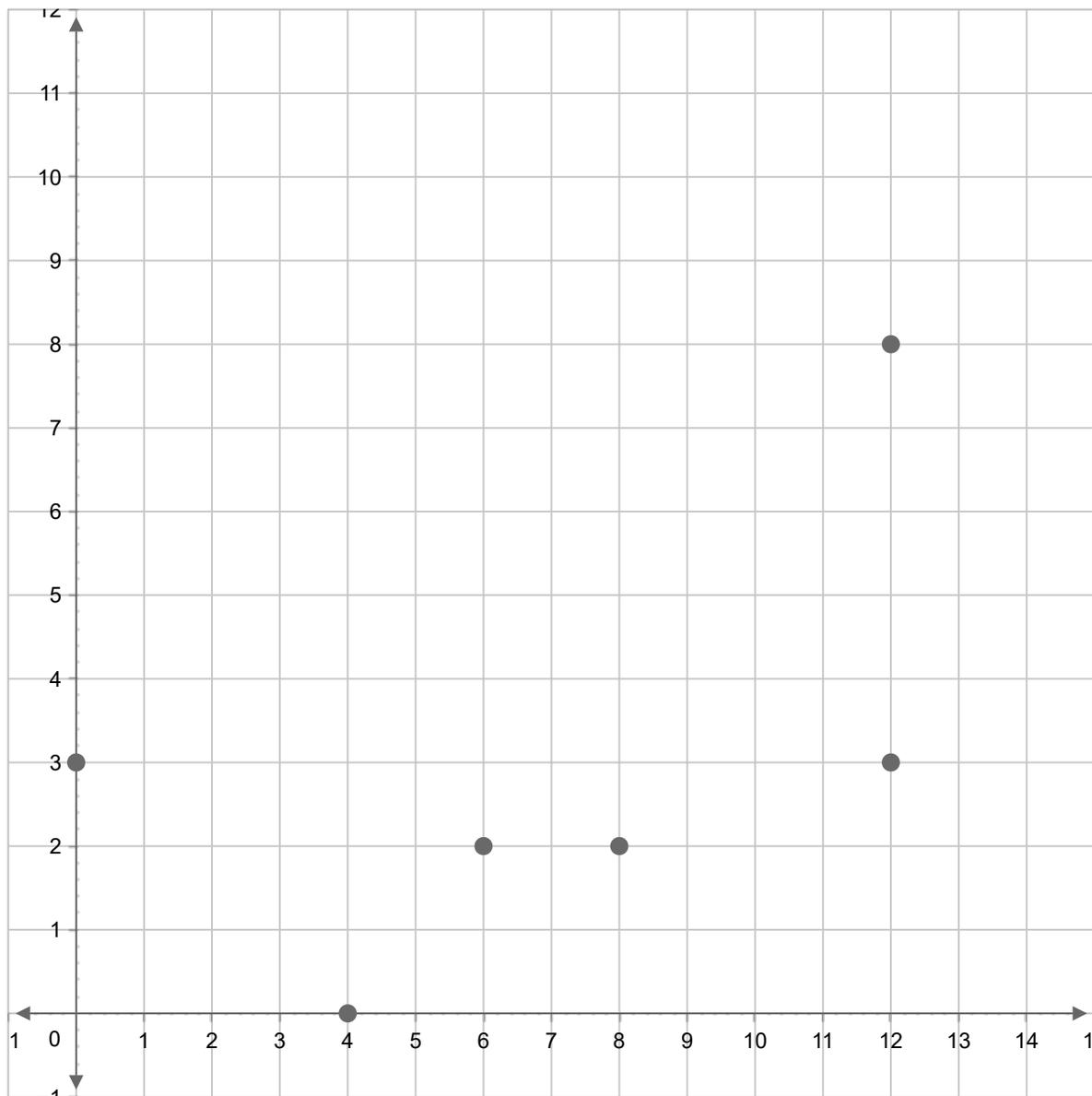
Number of Rides	Number of Tickets
8	32
3	12
15	60



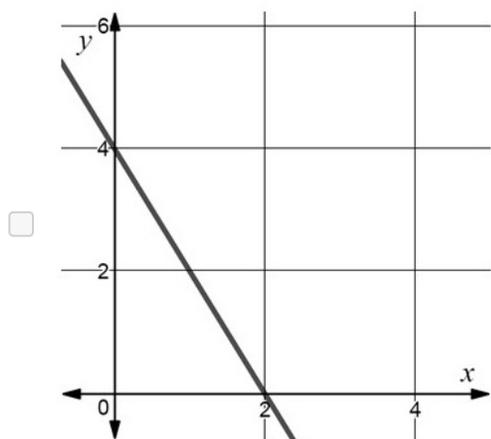
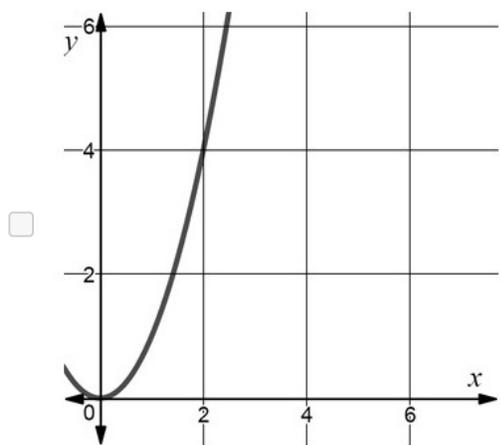
Number of Gallons	Cost (dollars)
5	12.50
8	20.00
10	25.00

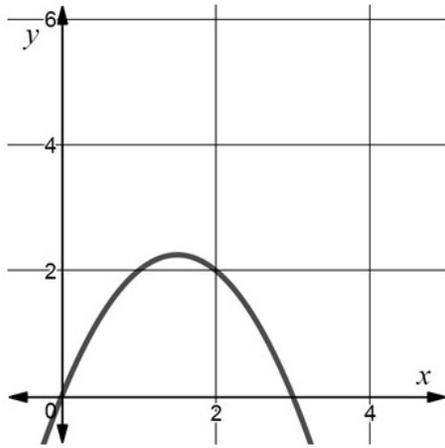
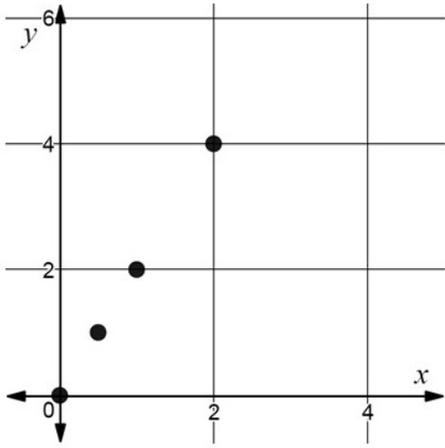
There are six points on the coordinate plane. Select the two points that show a proportional relationship.

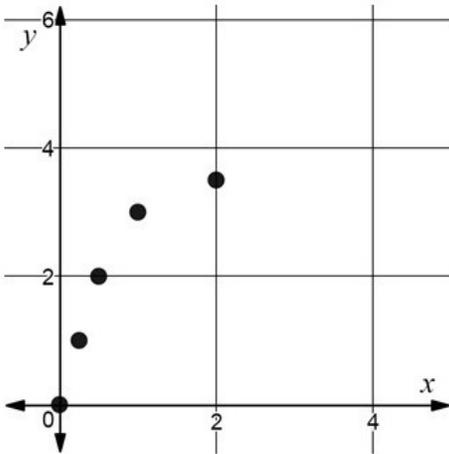
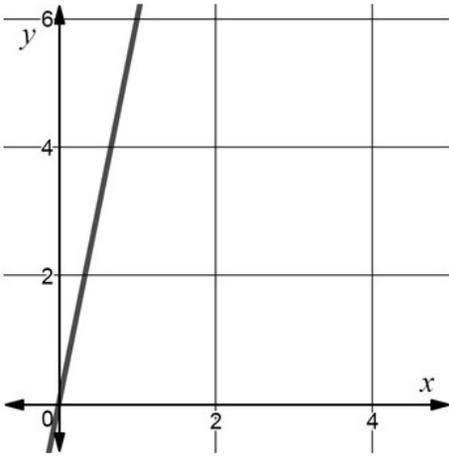
Click the point button. Then, click the point on the graph that you want to select.



Select all graphs that represent a proportional relationship.





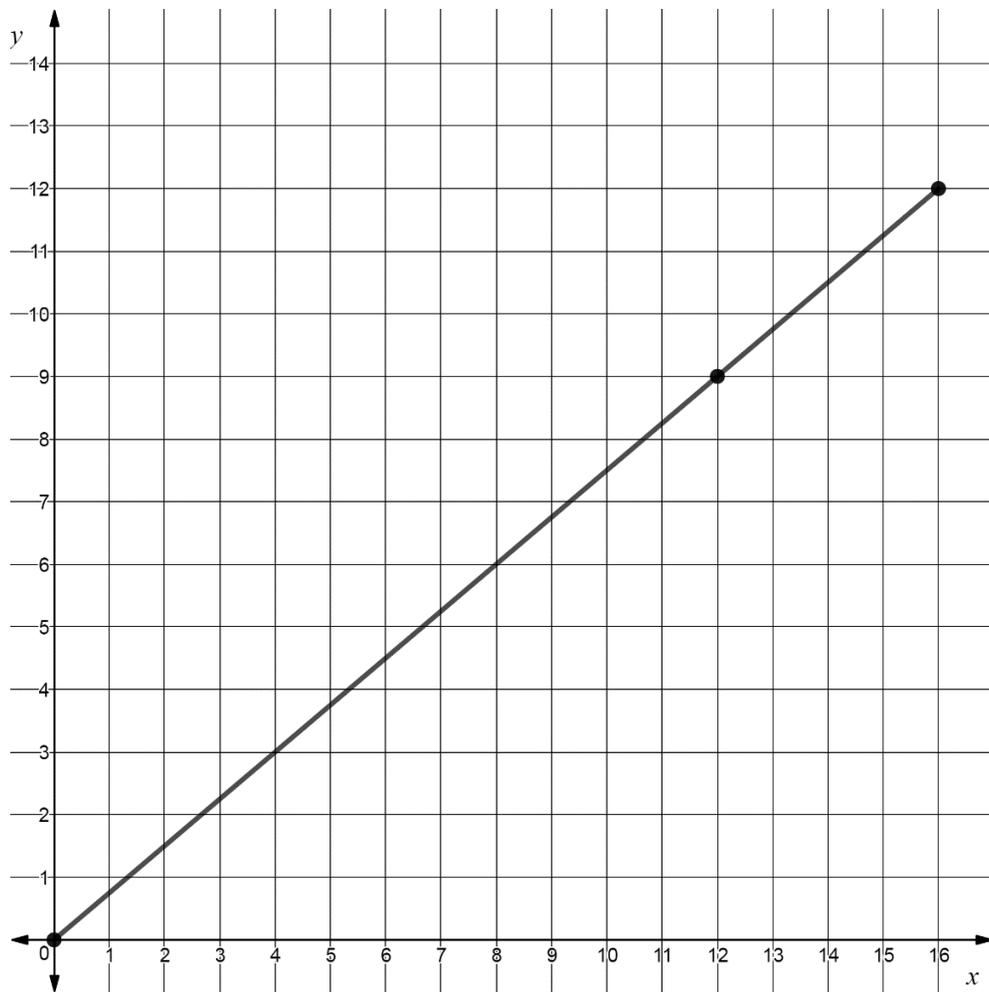


5 of 11

Peter is filling a swimming pool with water. After 7 minutes, the pool contains 1,372 gallons of water. After 12 minutes, the pool contains 2,352 gallons of water. At what rate, in gallons per minute, is the pool being filled?

The pool is being filled at a constant rate of gallons per minute.

What is the constant of proportionality represented in the graph?



$\frac{4}{3}$

$\frac{3}{4}$

$\frac{1}{3}$

$\frac{4}{1}$

7 of 11

The cost of building an airplane with 200 seats is about \$100 million. If the cost, in millions of dollars, c , is proportional to the number of seats, s , what equation can be used to determine the cost, in millions of dollars, to build an airplane with any number of seats?

Drag one number to correctly complete the equation.

$$c = \boxed{} s$$

300

0.5

200

2

100

The table shows the advertised cost and total cost after sales tax is included of two items purchased in Virginia.

Advertised Cost (dollars)	Total Cost (dollars)
a	t
51.00	53.55
163.00	171.15

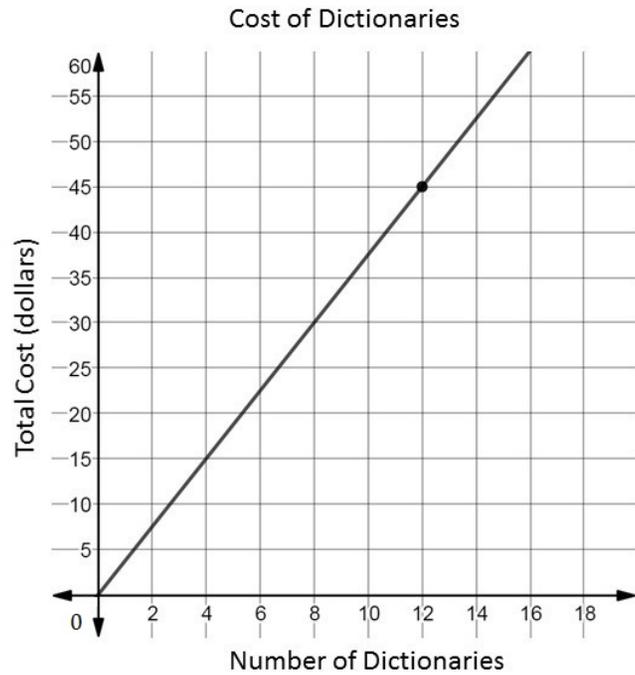
Which equation can be used to find the total cost, in dollars, on any item in Virginia?

- $t = 0.05a$
- $t = 2.55 + a$
- $t = 1.05a$
- $t = 0.05 + a$

A saltwater fish tank requires a certain salinity. To reach this requirement, the relationship between gallons of water and pounds of salt needs to be proportional. The relationship can be modeled as a line on the coordinate plane where x represents the number of gallons of water and y represents the number of pounds of salt. If the line passes through the point $(5, 1.5)$, what does that point represent?

The point $(5, 1.5)$ means that for every of water, of salt is needed to meet the salinity requirement.

A school bought each 3rd grade student a dictionary. The graph models this situation.



What does the point $(12, 45)$ represent?

- The cost of 12 dictionaries is \$45.
- For 45 dictionaries, the cost is \$12.
- The total cost of the dictionaries is 12 times \$45
- The cost of each dictionary is 12 divided by \$45.

Part A

A machine produces 480 gel pens per hour. Which equation represents the number of gel pens, p , produced in m minutes?

$p = 8m$

$p = 480m$

$p = 80m$

$p = 480 + m$

Part B

A new machine with better technology produces 210 gel pens every fifteen minutes. What is the constant of proportionality in the relationship between the number of gel pens and the number of minutes?

The constant of proportionality is .