

أكاديمية أجيال المستقبل

مرخصة من قبل دولة الإمارات العربية المتحدة



2025

MATH

Grade 7



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حقوق النشر محفوظة لأكاديمية أجيال المستقبل

Module. 1 : Proportional relationship (lessons 1, 2 & 3)

Name:

Grade (7 /)

- 1- A spider monkey can swing from tree to tree a distance of **50 feet in 10 seconds**. At this rate, how far can a spider monkey go in **1 minute**? (10 seconds = $\frac{1}{6}$ minute)

$$50 \div \frac{1}{6} = 50 \times 6 = 300 \text{ feet per min}$$

- 2- Hunter kicked a soccer ball. The ball went $\frac{33}{2}$ yards in $\frac{3}{8}$ second. At that rate, how far would the ball go in 1 second?

$$\frac{33}{2} \div \frac{3}{8} = \frac{33}{2} \times \frac{8}{3} = \frac{264}{6} = 44 \text{ yards per second}$$

- 3- Karmin drinks 42 oz of water in 1 day. In 1 week, Karina drinks 294 oz.

Is This relation proportional? **Yes**

Explain :

$$\frac{42 \text{ oz}}{1 \text{ day}} = \frac{294 \text{ oz}}{7 \text{ days}} = 2.5$$

- 4- Rana can read 3 pages of his book in 6 minutes. Gabby can read 4 pages of her book in 7 minutes..

Is This relation proportional? **NO**

Explain :

$$\frac{3 \text{ pages}}{6 \text{ min}} \neq \frac{4 \text{ pages}}{7 \text{ min}} = 2.5$$

- 5- Bader reaches into the box of colored pencils. In the box, there are 5 red pencils for every 4 blue pencils.

Does the situation represent a proportional relationship? **Yes**

Red Pencils	5	10	15	20
Blue Pencils	4	8	12	16

- 6- **Complete** the table. Dana is selling his trading cards. He will sell the first 5 cards for \$3 and each card after that for \$1.

Does the situation represent a proportional relationship? **NO**

Number of Cards	5	6	7	8
Total Cost (\$)	3	4	5	6

- 7- The table shows the amount of money Hanan will have to spend based on how many tickets to the musical she buys.

Use the table to find the constant of proportionality.

$$K = \frac{24}{4} = 6$$

Total Cost (\$)	24	48	72	96
Number of Tickets	4	8	12	16

Good Luck!!

CONTACT US
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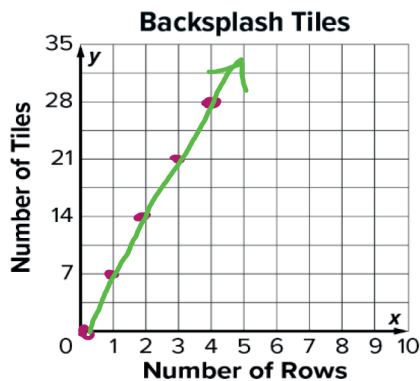
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Revision 1.4 / 1.5/ 1.6

1. The number of tiles Zion needs to put on the wall to make a backsplash is shown in the table.

Number of Rows	0	1	2	3	4
Number of Tiles	0	7	14	21	28

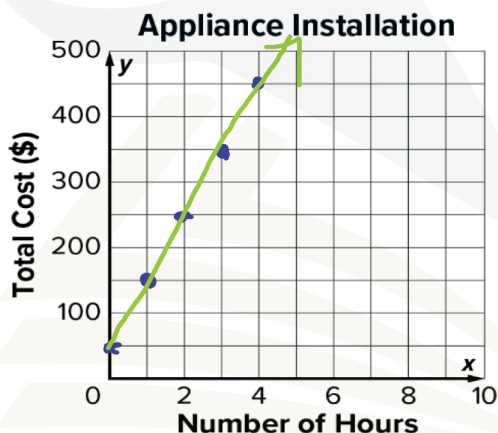


Is this relation (graph) **Proportional** ? *yes*

Explain ? *it's a straight line passing through (0,0)*

3. The table shows the cost of hiring Mr. Hamilton, the appliance installer.

Number of Hours	0	1	2	3	4
Total Cost (\$)	50	150	250	350	450

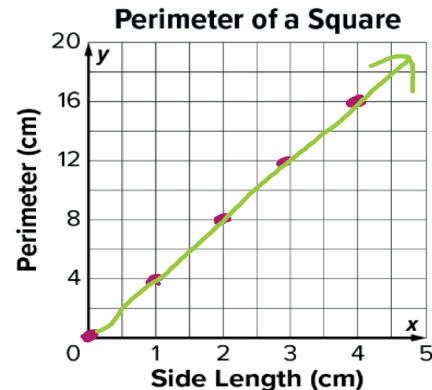


Is this relation (graph) **Proportional** ? *No*

Explain ? *it is not passing through (0,0)*

2. The table shows the perimeter of a square based on the length of the sides.

Side Length (cm)	0	1	2	3	4
Perimeter (cm)	0	4	8	12	16

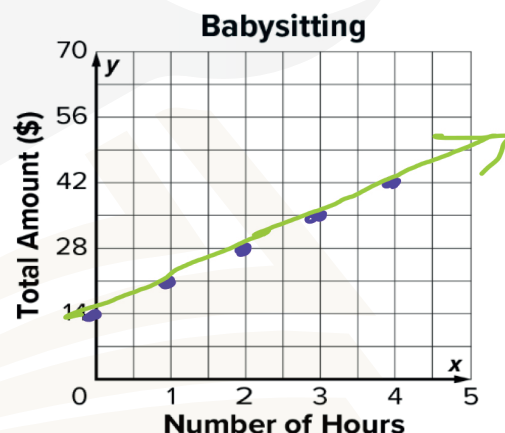


Is this relation (graph) **Proportional** ? *yes*

Explain ? *it's straight line passing through (0,0)*

4. The table shows how much Charlotte gets paid to babysit.

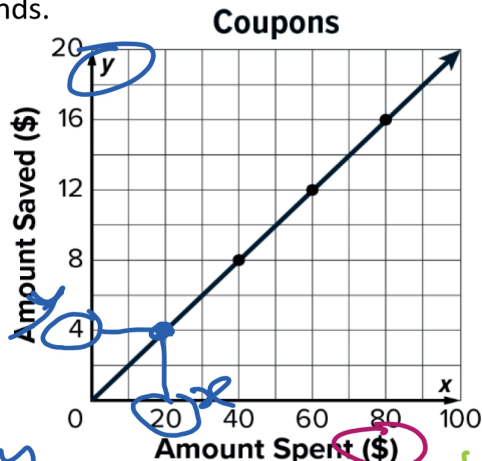
Number of Hours	0	1	2	3	4
Total Amount (\$)	14	21	28	35	42



Is this relation (graph) **Proportional** ? *No*

Explain ? *it is not passing through (0,0)*

5. The amount Javon saves when using a percent-off coupon is proportional to how much he spends.

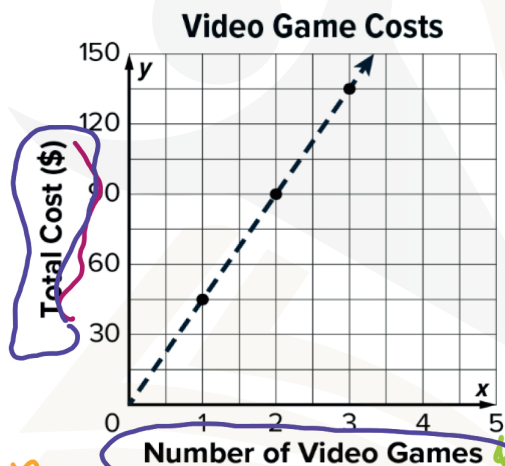


a) $K = \dots \frac{y}{x} = \frac{4}{20} = \frac{1}{5}$

b) The equation..... $y = \frac{1}{5}x$

c) If the amount spent is **65 \$**
then the **amount saved** is = $\frac{1}{5} \times 65 = 13$

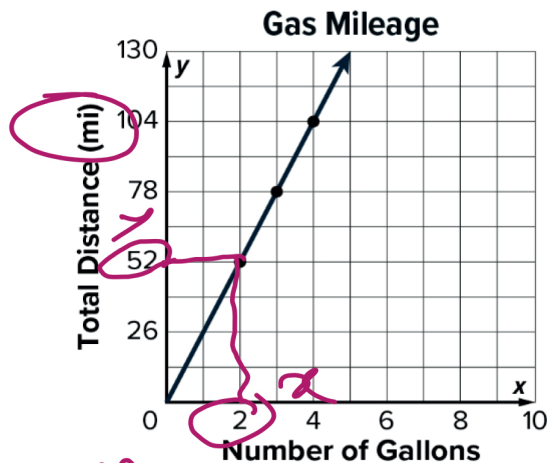
7. The amount of money Jaxson spends on games is proportional to how many games he buys. What do the points (1, 45) and (0, 0) represent?



(0,0) ? 0 video games for \$0

(1,45) ? 1 video game for \$45

6. The amount of gasoline a car uses is proportional to the distance a car travels.

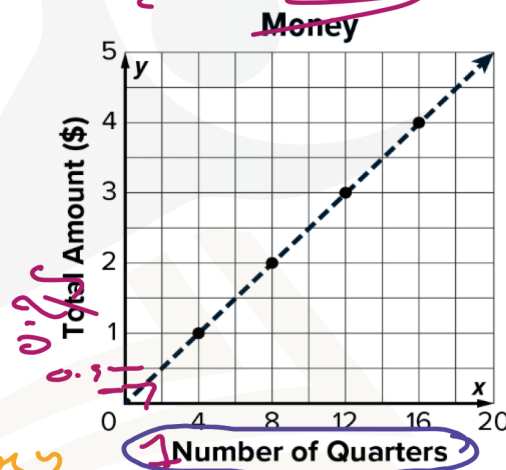


a) $K = \dots \frac{y}{x} = \frac{52}{2} = 26$

b) The equation..... $y = 26x$

c) If the number of gallons is **3**
then the **total distance** is = $26 \times 3 = 78$

8. The value, in dollars, of the quarters in Alexander's hand is proportional to the number of quarters he has. What do the points (4, 1) and (12, 3) represent?



(0,0) ? 0 Quarter for \$0

(1,0.25) ? 1 Quarter for \$0.25

- 9- In Sara's class, **2 out of 5 people** wear glasses. Predict how many people wear glasses in Sara's town if there are **450 people**.

$\frac{2}{5} \times 450 = 180$

- 10 - There are **3 wild cards** for every **54 cards** in a game. If Jeanette has **72 game cards**, predict how many wild cards there are in the deck.