

Patterns, Equations, and Graphs Exit Quiz

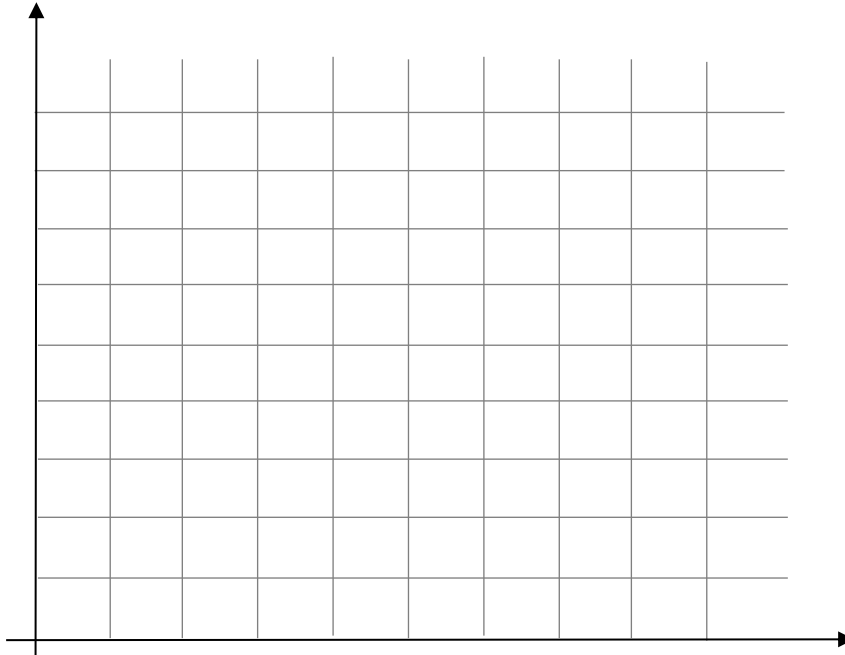
Tell whether the given equation has the ordered pair as a solution.

1. $x + 4 = 2y$ $(-2, 1)$

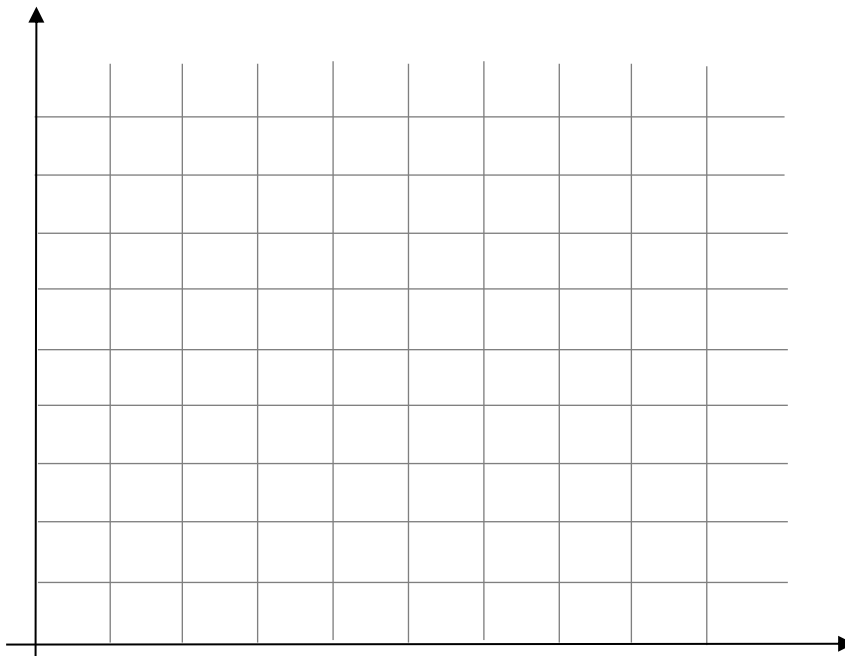
2. $5x + 8 = -x + y$ $(2, 20)$

Use a table, an equation, and a graph to represent each relationship.

3. It takes 2 hours for Shane to travel 10 km at a constant speed.



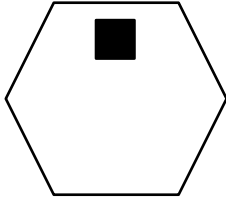
4. The cost of a brand new car is \$16,000, and its value decreases every year by 10%.



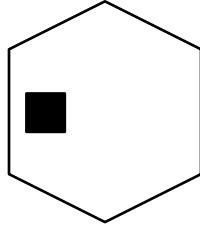
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Predict the next figure in the each sequence.

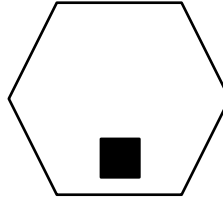
5.



i.



ii.



iii.



iv.

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ANSWER

Tell whether the given equation has the ordered pair as a solution.

1. $x + 4 = 2y$ $(-2, 1)$

$$\begin{aligned} x + 4 &= 2y \\ -2 + 4 &= 2(1) \\ 2 &= 2 \end{aligned}$$

2. $5x + 8 = -x + y$ $(2, 20)$

$$\begin{aligned} 5(2) + 8 &= -(2) + 20 \\ 10 + 8 &= -2 + 20 \\ 18 &= 18 \end{aligned}$$

Use a table, an equation, and a graph to represent each relationship.

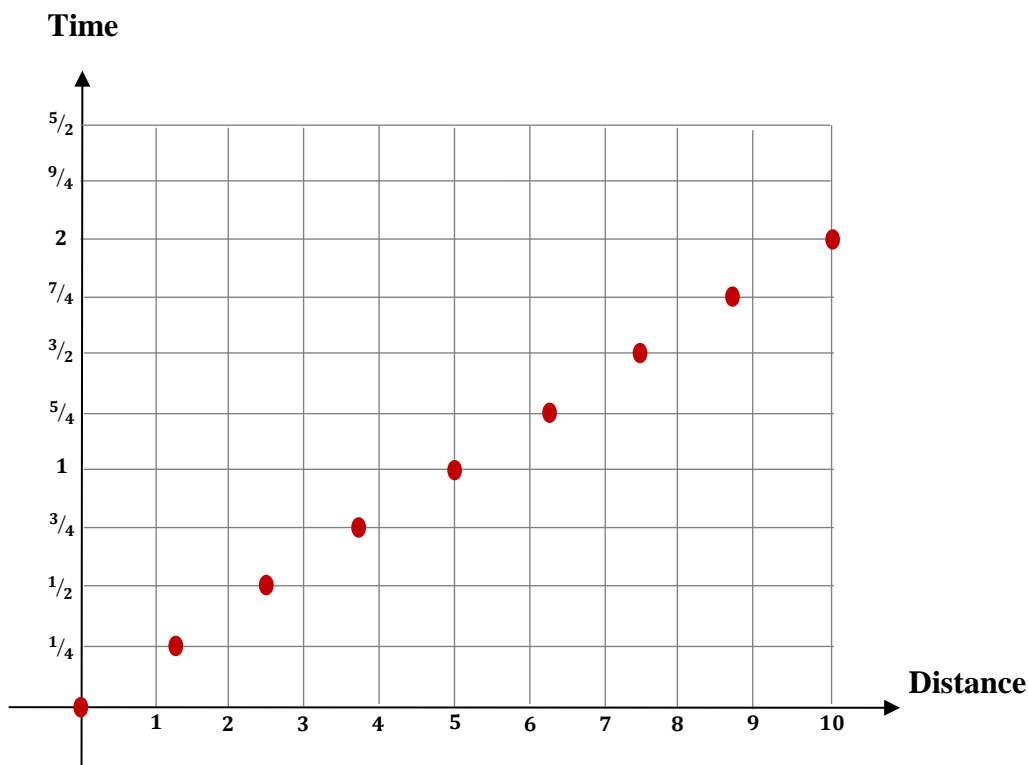
3. It takes 2 hours for Shane to travel 10 km at a constant speed.

$$d = t \cdot \frac{10 \text{ km}}{2 \text{ hours}}$$

$$d = t \left(5 \frac{\text{km}}{\text{hour}} \right)$$

Where: d = distance traveled at t time
 t = given time from 0 to 2 hours

t (hour)	d (km)
0	0
0.25	1.25
0.50	2.50
0.75	3.75
1.00	5.00
1.25	6.25
1.50	7.50
1.75	8.75
2.00	10.00



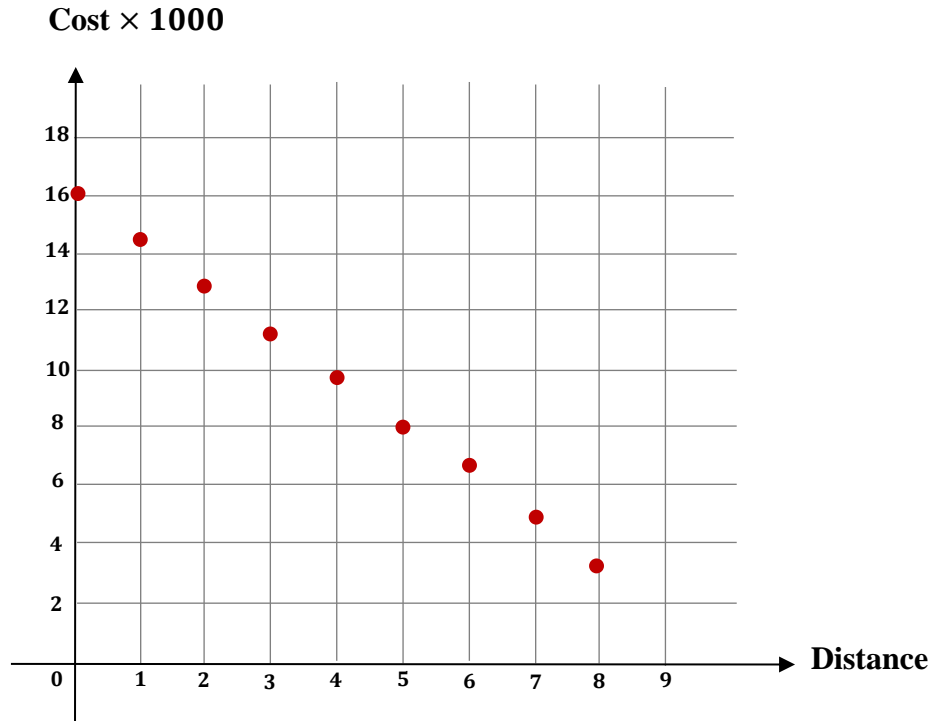
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4. The cost of a brand new car is \$16,000, and its value decreases every year by \$1,600.

$$c = \$16000 - x \left(\frac{\$1600}{\text{year}} \right)$$

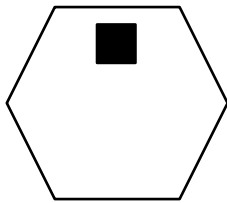
Where: c = cost of the car after x number of years
 x = number of year passed

x (year)	c (\$)
0	16,000
1	14,400
2	12,800
3	11,200
4	9,600
5	8,000
6	6,400
7	4,800
8	3,200

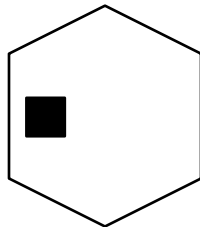


Predict the next figure in the each sequence.

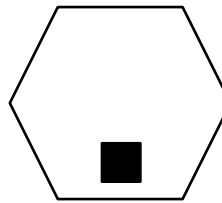
6.



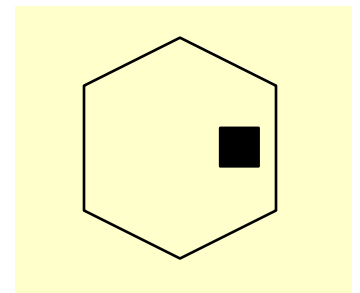
i.



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