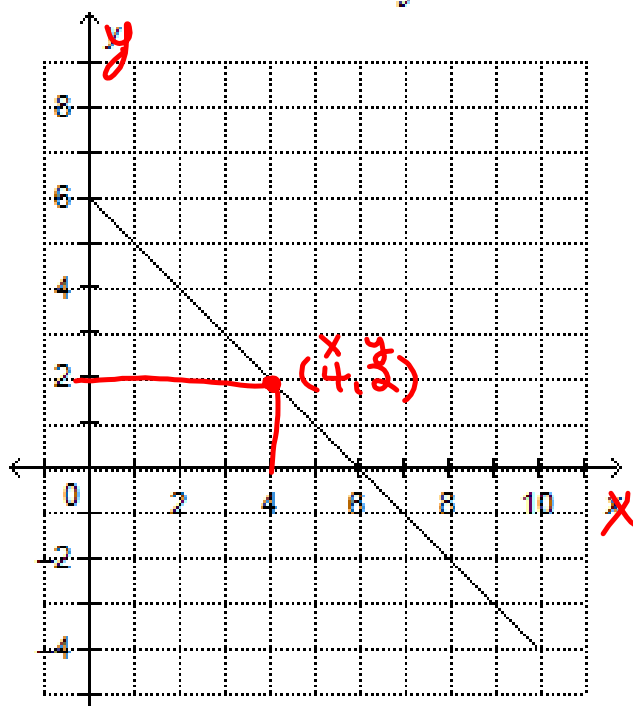
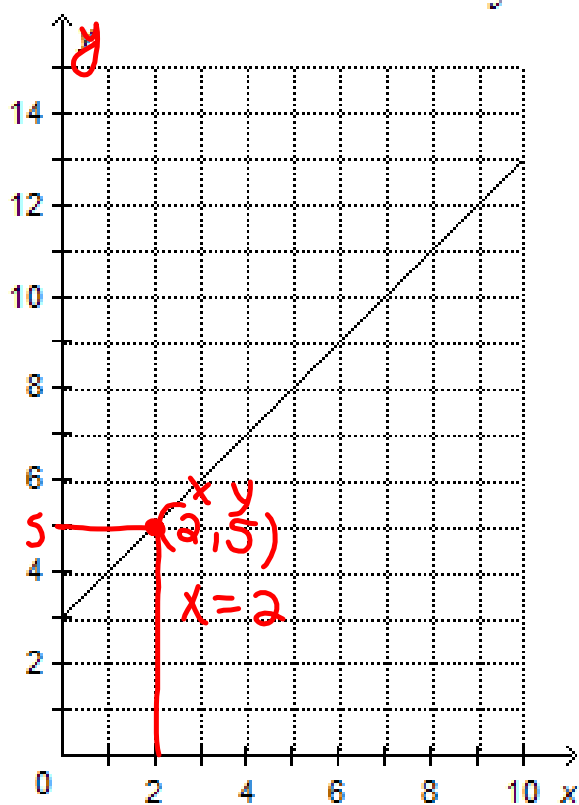


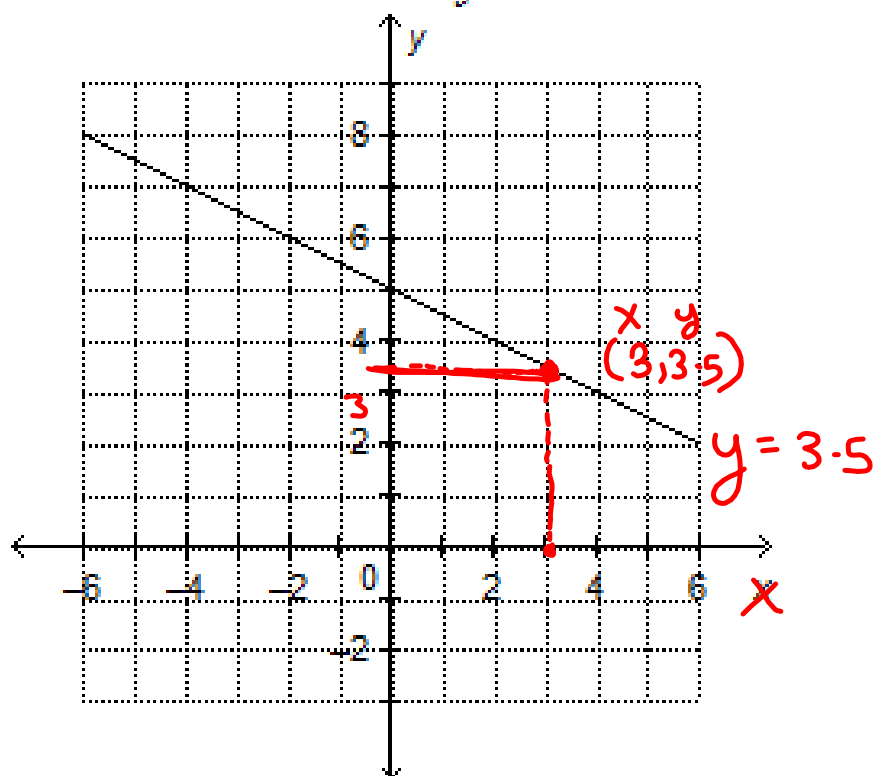
1. This graph represents a linear relation.
Determine the value of y when $x = 4$.



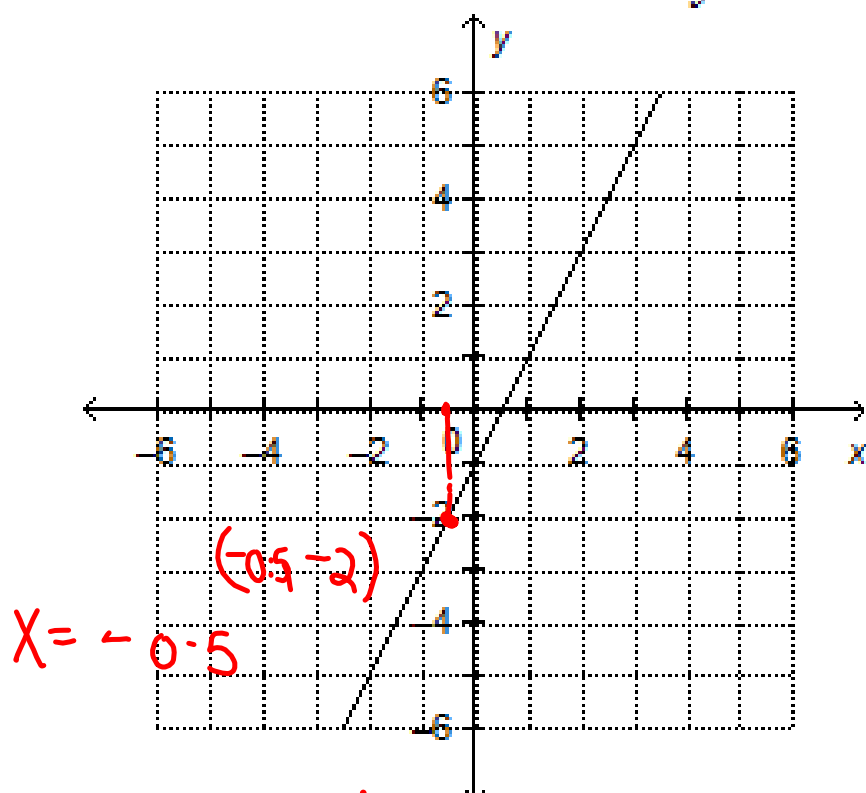
2. This graph represents a linear relation.
Determine the value of x when $y = 5$.



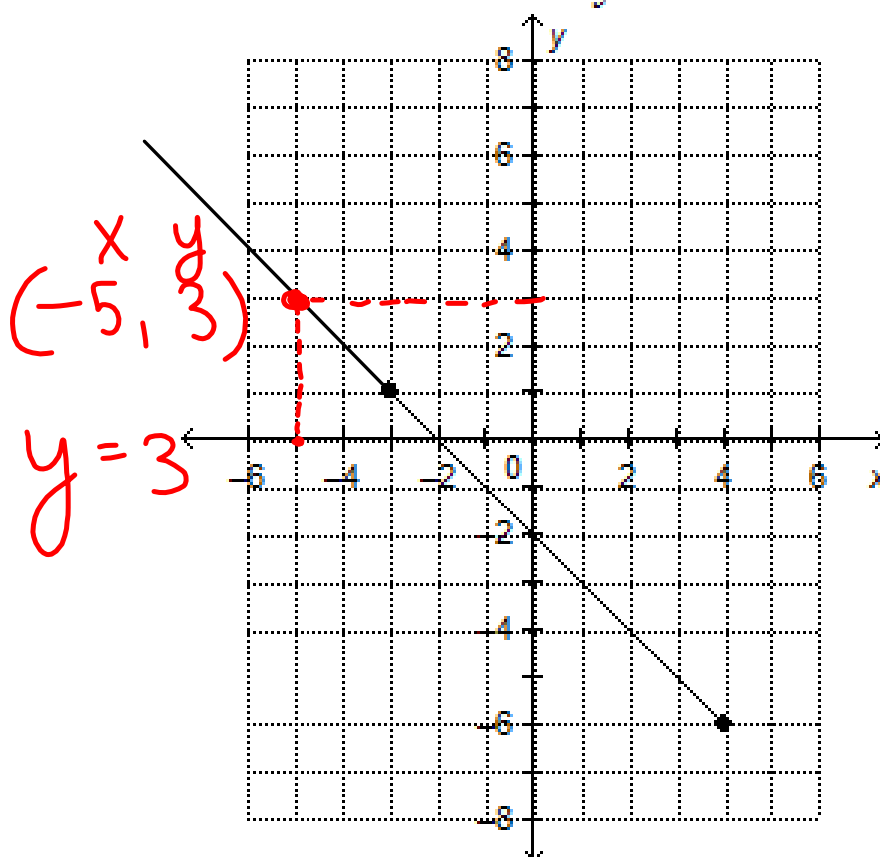
3. This graph represents a linear relation.
Determine the value of y when $x = 3$.



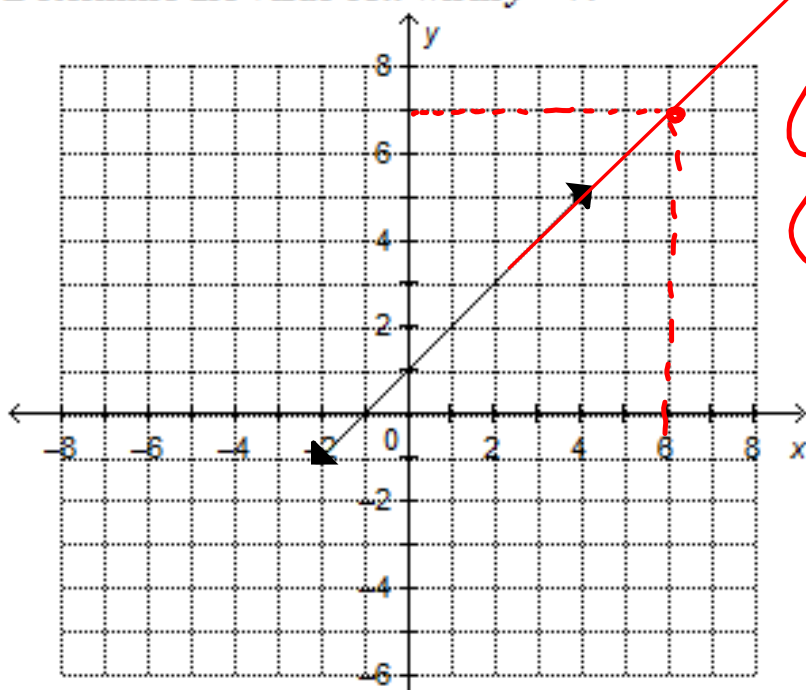
4. This graph represents a linear relation.
Determine the value of x when $y = -2$.



5. This graph represents a linear relation.
Determine the value of y when $x = -5$.

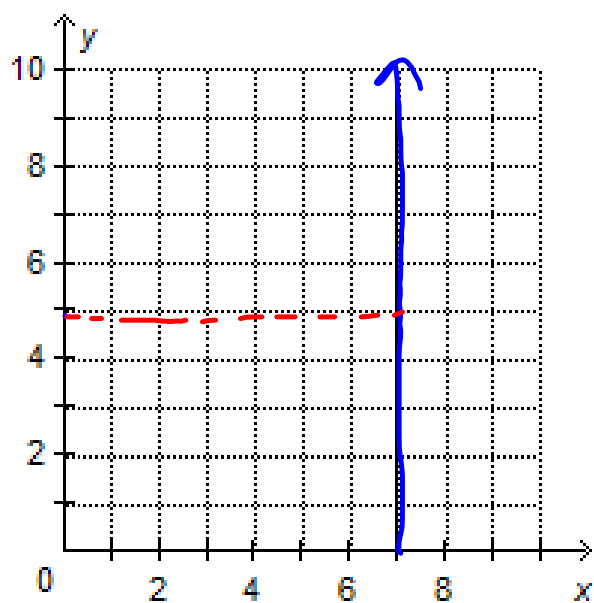


6. This graph represents a linear relation.
Determine the value of x when $y = 7$.



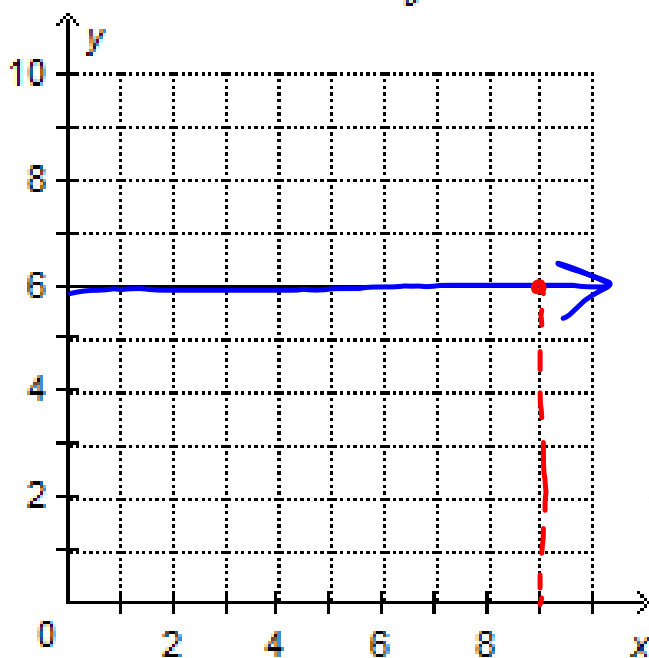
$$\begin{array}{l} x \quad y \\ (? , 7) \\ (6, 7) \\ x = 6 \end{array}$$

7. This graph represents a linear relation.
Determine the value of x when $y = 5$.



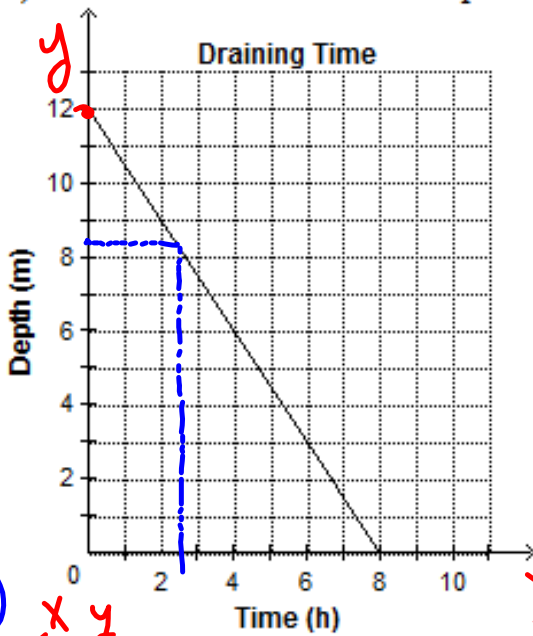
Undefined.
 $x = 7$

8. This graph represents a linear relation.
Determine the value of y when $x = 9$.



Slope = 0
 $y = 6$

9. This graph shows the depth of water in a tank, in metres, as the water drains out.
 a) Estimate the depth of water after 3 h.
 b) Estimate how much time has passed if there is 8.5 m of water in the tank.

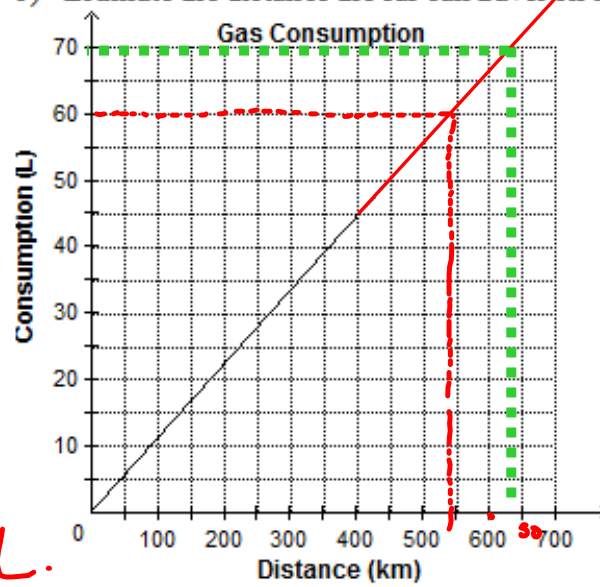


$y = 8.5$ $x = ?$

a) x y
 $(3, ?)$
 $(3, 7.5)$ $y = 7.5\text{m}$

b) $y = 8.5\text{m}$ $x = 2.5\text{hs}$

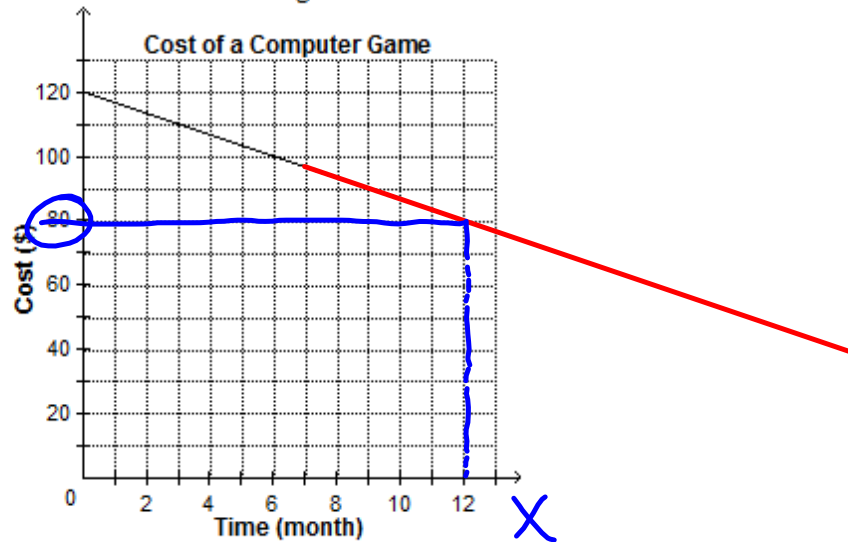
10. This graph shows the gas consumption rate of a car.
- Estimate the volume of gas required to travel 630 km.
 - Estimate the distance the car can travel on 60 L of gas.



a) 68 or 69 L.

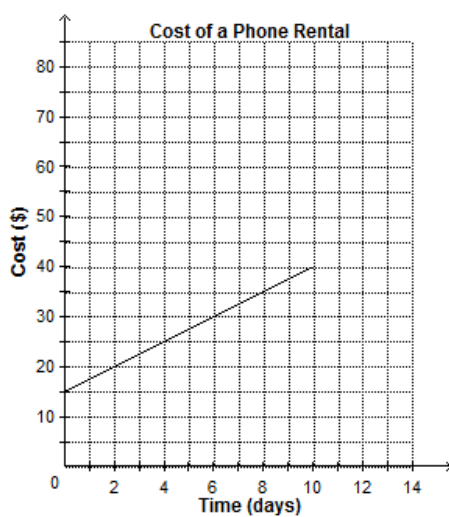
b) 540 km

- 11 This graph shows how the cost of a new computer game changes with time. Estimate the cost of the game 12 months after it is released.



\$ 80.00 after 12 months.

12. A resort rents out mobile phones by the day. This graph shows how the cost to rent a phone relates to the number of days the phone is rented.
- Estimate the cost to rent a phone for:
 - 1 day
 - 13 days
 - A customer paid \$35.00 to rent a phone. For how many days did the customer rent the phone?



Applications of Linear Systems