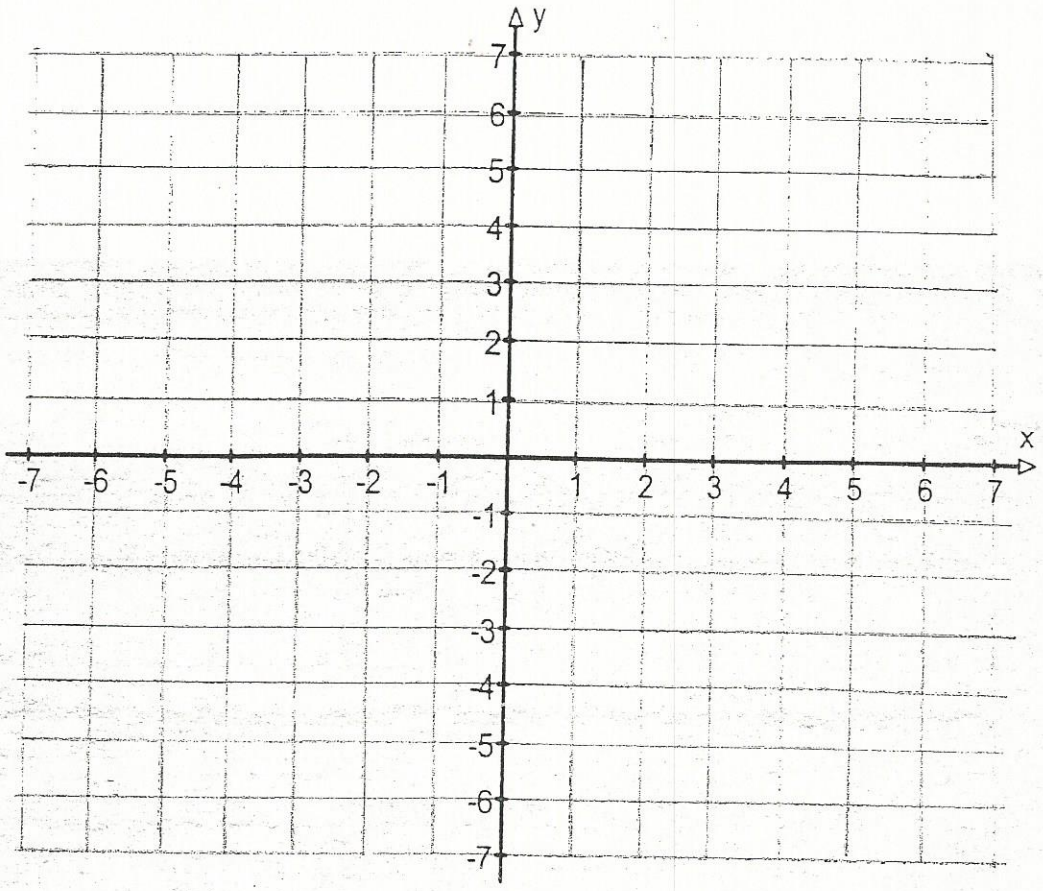
Relations Question Type A

e.g.

Graph the following relation in a Cartesian plane:

$$S = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid -\frac{y}{3} > 2 + \frac{y}{6}\right\}$$

Then determine its domain and range.

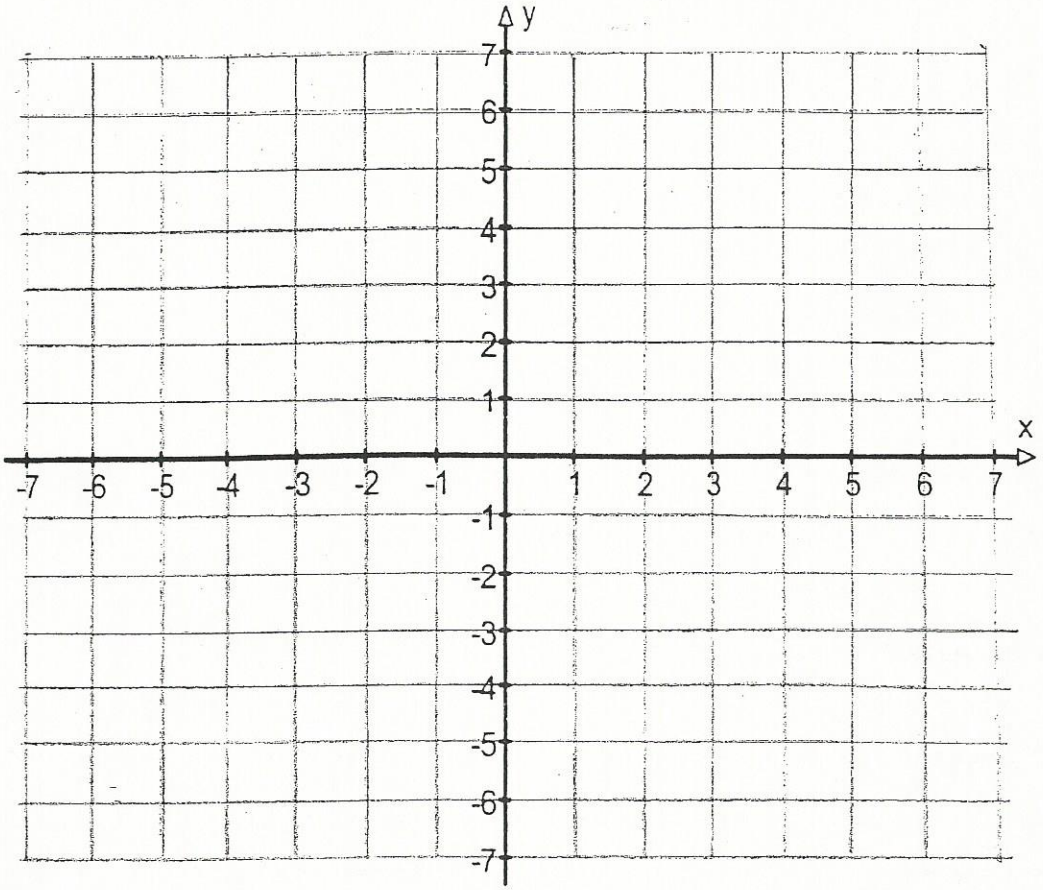


Domain:_____ Range:_____

1. Graph the following relation in a Cartesian plane:

$$S = \left\{ (x, y) \in \mathbb{R} \times \mathbb{R} \mid -\frac{y}{2} > 3 + \frac{y}{4} \right\}$$

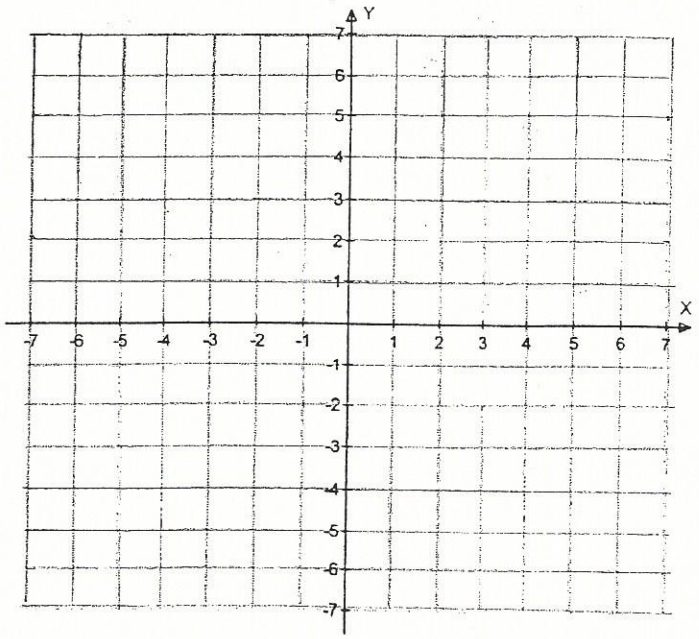
Then determine its domain and range.



Domain:_____ Range:_____

2. Graph the following relation in a Cartesian plane:

$$R = \left\{ (x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{x}{2} - 1 > \frac{-y}{6} \right\}$$

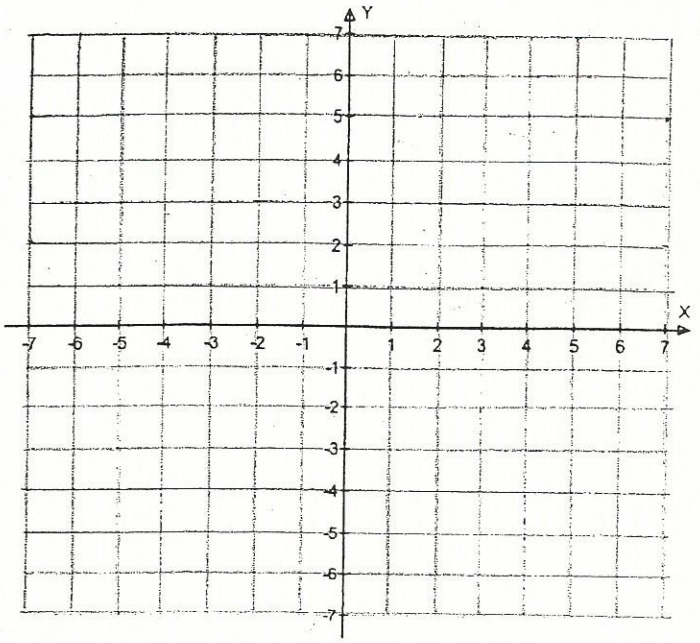


Then determine its domain and range.

Domain:_____ Range:_____

3. Graph the following relation in a Cartesian plane:

$$R = \left\{ (x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{x}{3} + 1 < \frac{-y}{2} \right\}$$



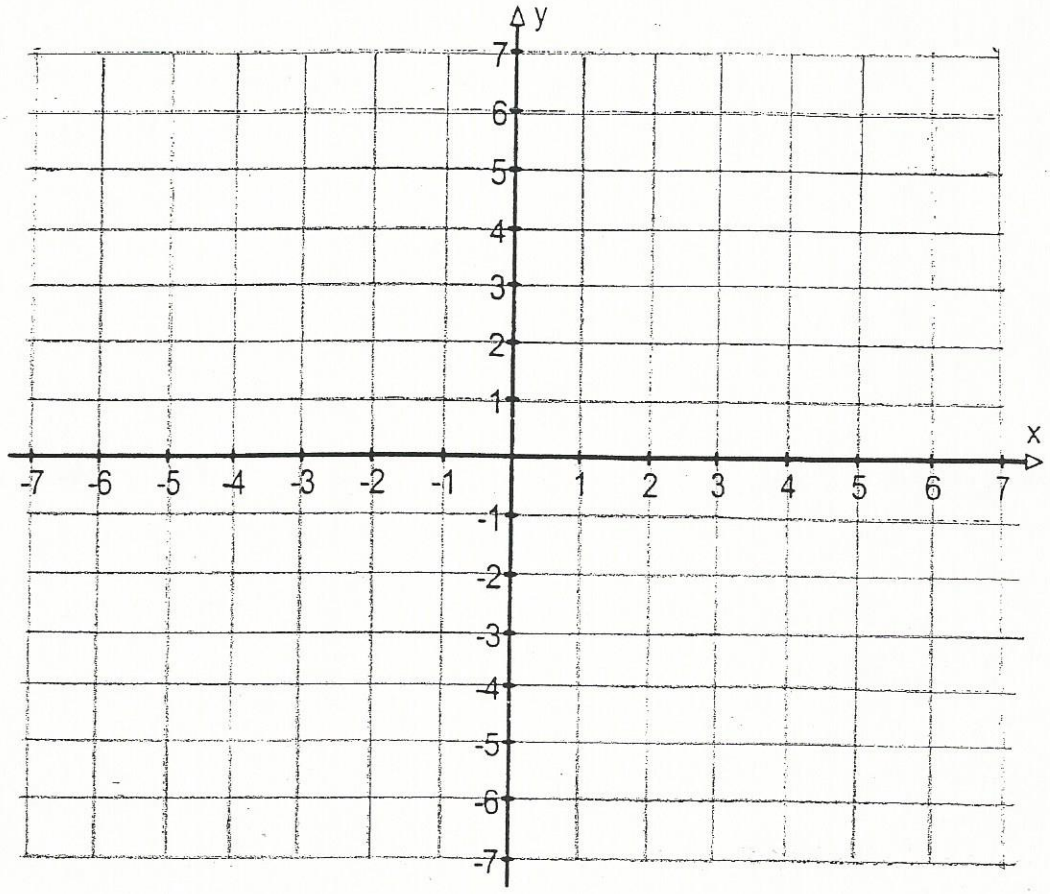
Then determine its domain and range.

Domain:_____ Range:_____

4. Graph the following relation in a Cartesian plane:

$$S = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{y}{2} < -2 + \frac{y}{6}\right\}$$

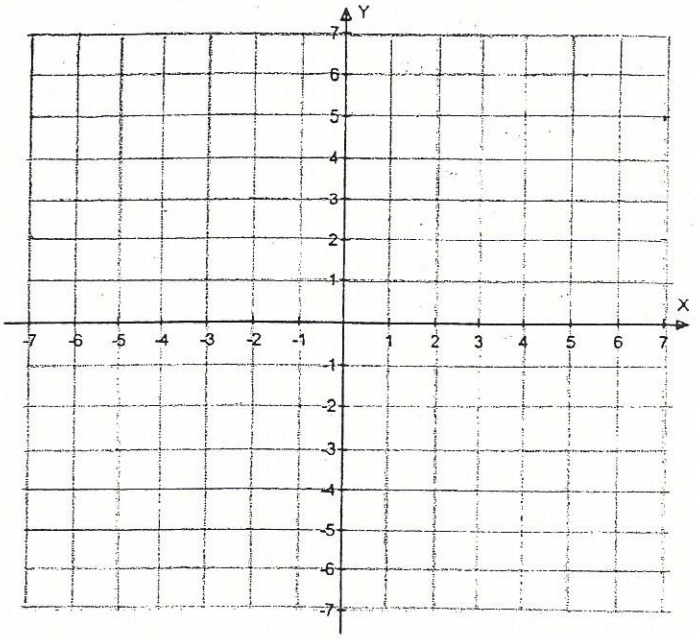
Then determine its domain and range.



Domain:_____ Range:_____

5. Graph the following relation in a Cartesian plane:

$$R = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{x}{8} - \frac{1}{2} < \frac{-y}{2}\right\}$$



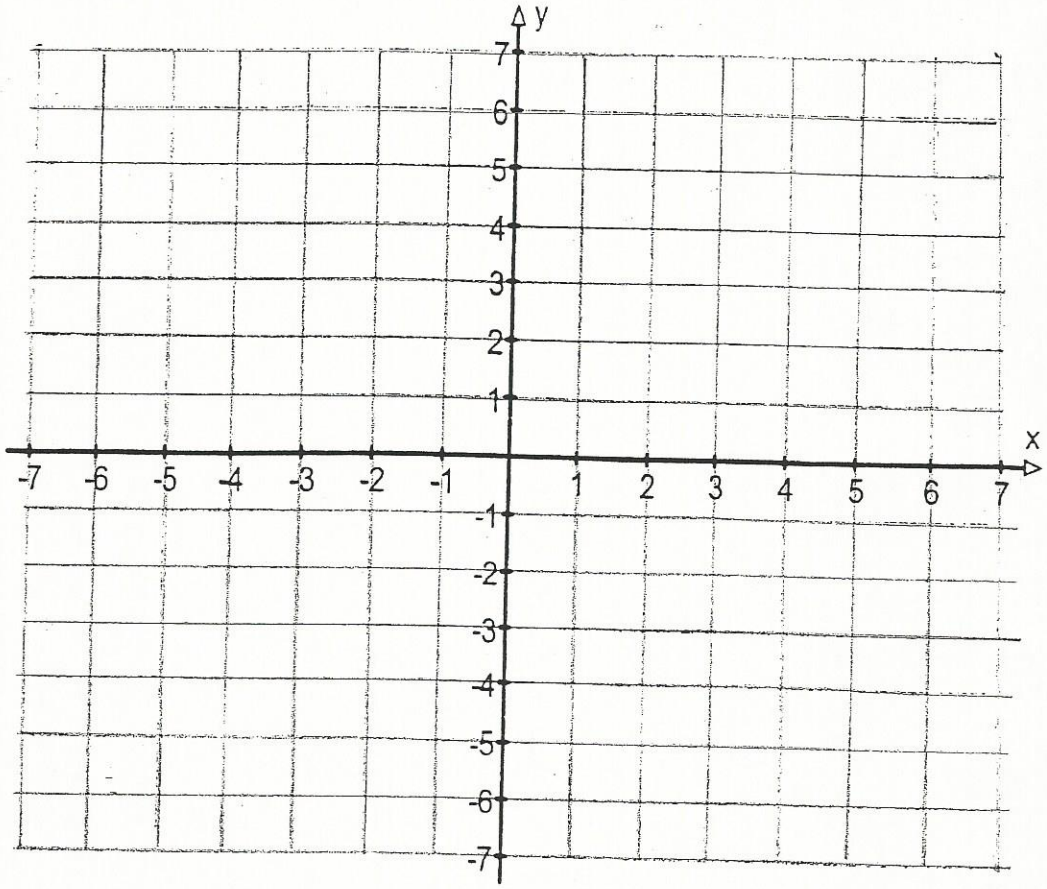
Then determine its domain and range.

Domain:_____ Range:_____

6. Graph the following relation in a Cartesian plane:

$$S = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid -\frac{y}{4} > \frac{-1}{4} - \frac{y}{8}\right\}$$

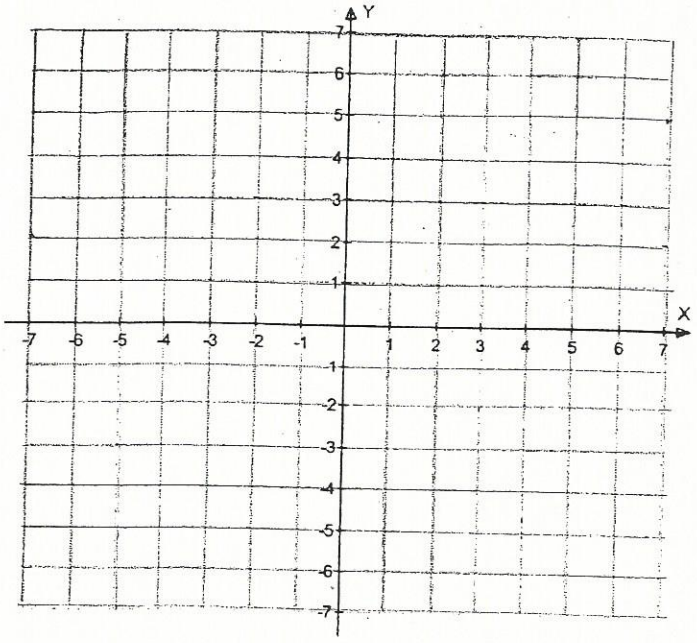
Then determine its domain and range.



Domain:_____ Range:_____

7. Graph the following relation in a Cartesian plane:

$$R = \left\{ (x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{x}{4} + 1 > \frac{-y}{2} \right\}$$



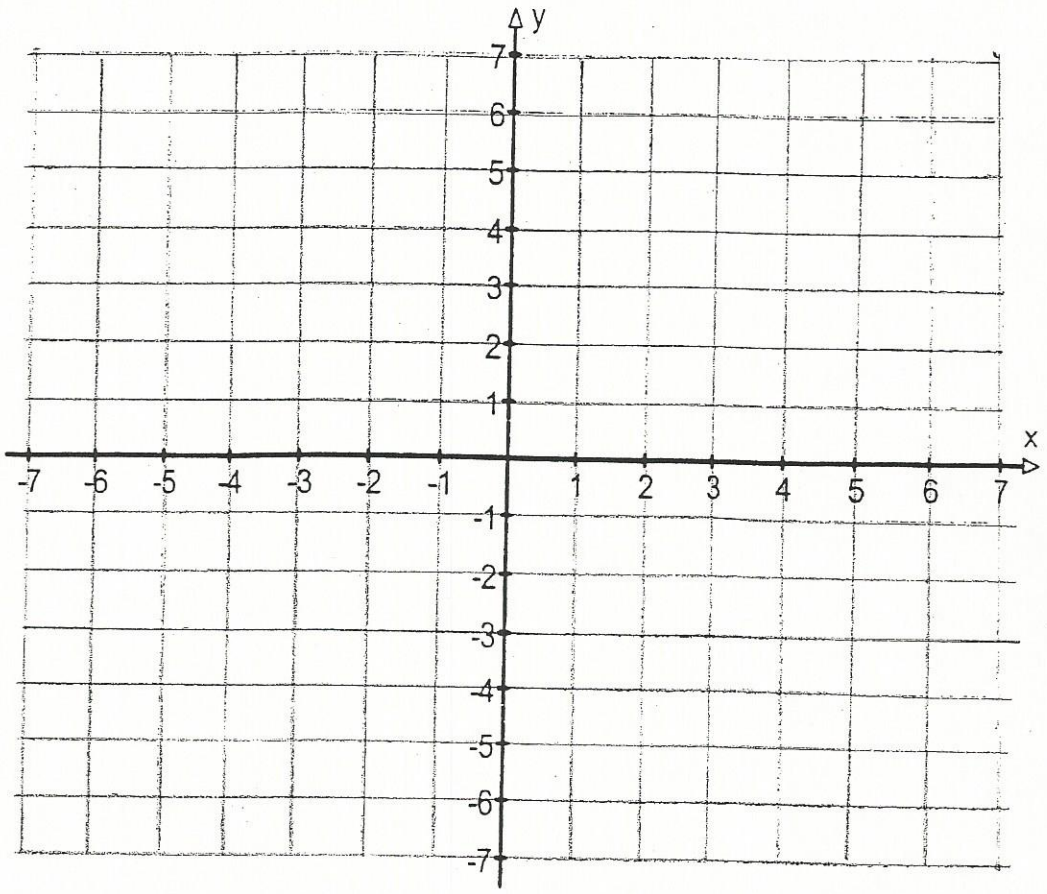
Then determine its domain and range.

Domain:_____ Range:_____

8. Graph the following relation in a Cartesian plane:

$$S = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid -\frac{y}{12} > 1 + \frac{y}{6}\right\}$$

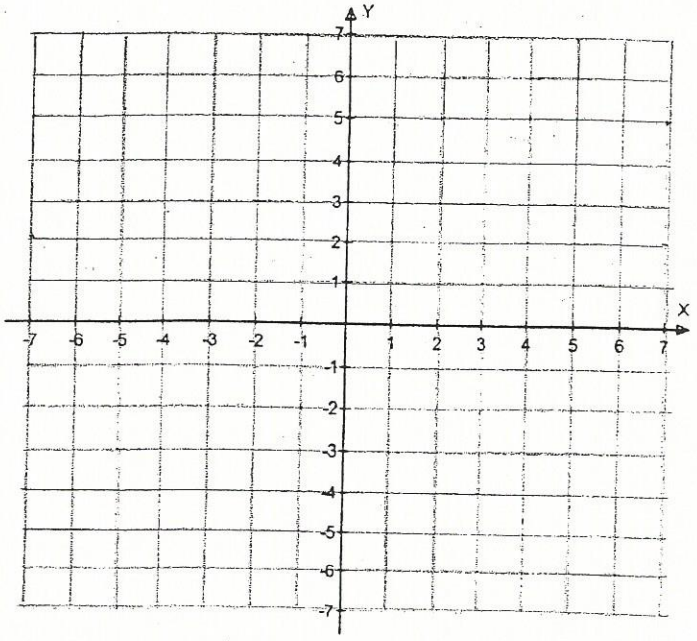
Then determine its domain and range.



Domain:_____ Range:_____

9. Graph the following relation in a Cartesian plane:

$$R = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{x}{5} - 1 < \frac{-y}{2}\right\}$$



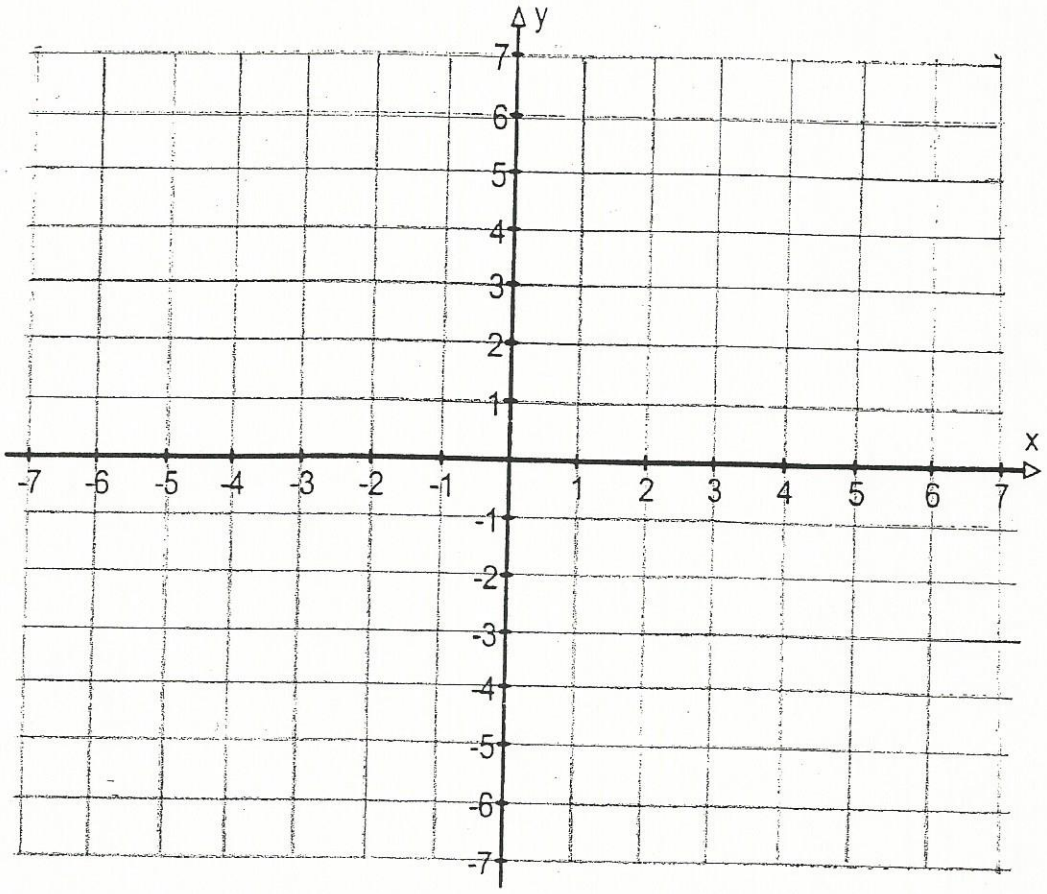
Then determine its domain and range.

Domain:_____ Range:_____

10. Graph the following relation in a Cartesian plane:

$$S = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid -\frac{y}{5} > \frac{1}{3} - \frac{y}{15}\right\}$$

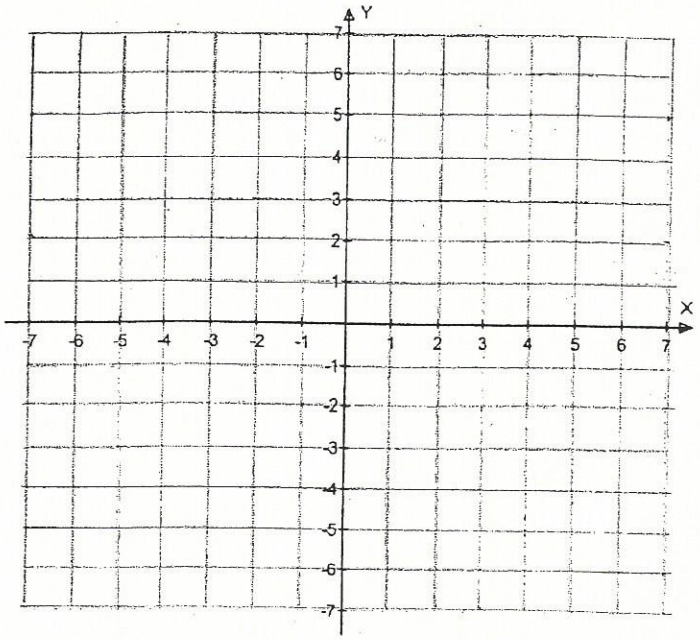
Then determine its domain and range.



Domain:_____ Range:_____

11. Graph the following relation in a Cartesian plane:

$$R = \left\{ (x, y) \in \mathbb{R} \times \mathbb{R} \mid \frac{x}{9} + \frac{1}{3} < \frac{-y}{3} \right\}$$



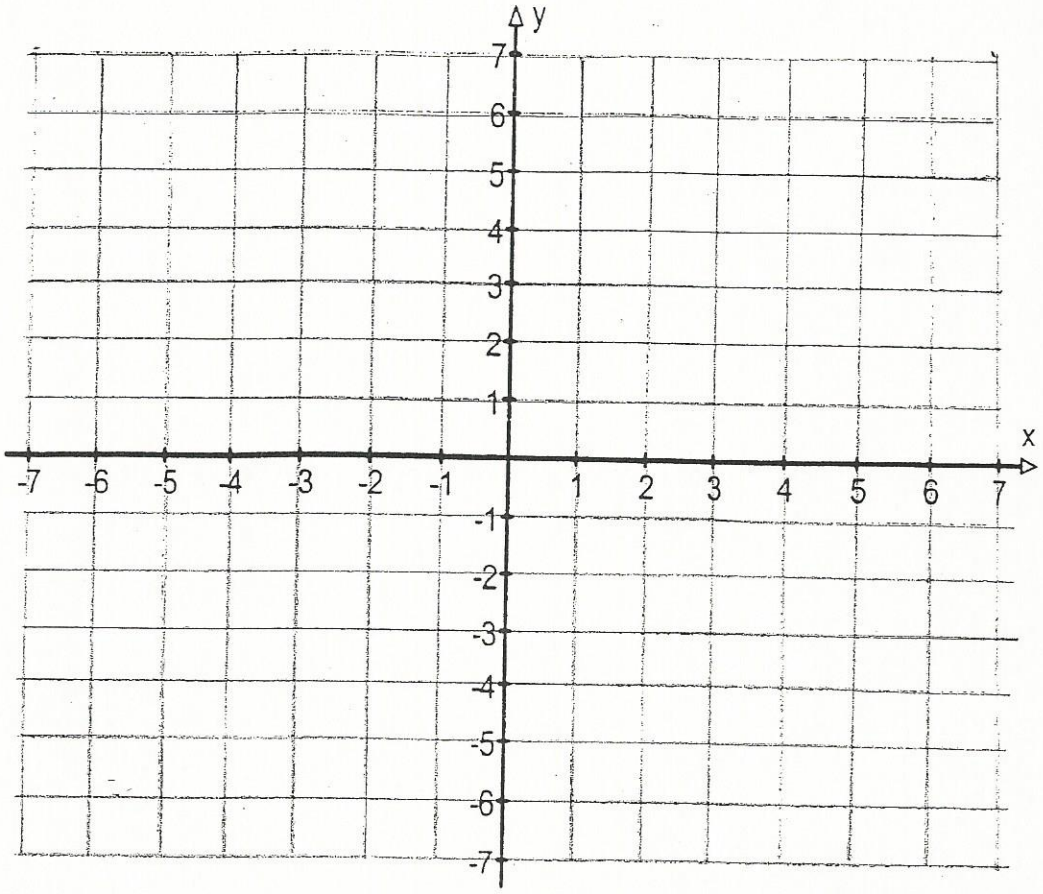
Then determine its domain and range.

Domain:_____ Range:_____

12. Graph the following relation in a Cartesian plane:

$$S = \left\{(x, y) \in \mathbb{R} \times \mathbb{R} \mid -\frac{y}{8} < \frac{-1}{4} - \frac{y}{4}\right\}$$

Then determine its domain and range.



Domain:_____ Range:_____