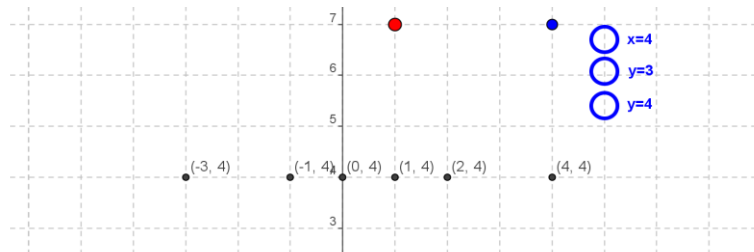


Student Activity on Lines Parallel to the Axes

Use in connection with the interactive file "Lines Parallel to the Axes" on the Student's CD.

To explore the properties of lines parallel to the axes



The slider called "Step" is used to change the information on the screen.

To start set the slider to "Step = 1"

1. What is common to all the points labelled on the screen? _____

2. Write down another point on this line? _____

3. Check your answer by moving the red dot onto the point you have just written down.

4. Move the green dots that have just appeared. What do you notice about the coordinates of the dots? _____

5. What line is this green line parallel to? _____

6. Move the blue dot into the circle that you think is the equation of this line.

7. Move the “Step” slider to 2. What is common to all the points shown on the screen? _____
8. Write down another point on this line? _____
9. Check your answer by moving the red dot onto the point you have just written down.
10. Move the green dots that have just appeared. What can you notice about the coordinates of the dots? _____

11. What is this line parallel to? _____
12. Move the blue dot into the circle that you think is the equation of this line.
13. Move the “Step” slider to 3. Take a look at the equation of the line and the points on the line. What do you notice? _____
14. Drag the line downwards so that the equation is $y=1$. Write down all the points that are shown on the line _____
15. Drag the line downwards so that the equation is $y=0$. Write down all the points that are shown on the line _____
16. Write down another name for this line _____
17. The lines $y=3$, $y=1$, $y=0$, $y=-3$ are all... _____
18. Move the “Step” slider to 4. Take a look at the equation of the line and the points on the line. What do you notice? _____

19. Drag the line to the left so that the equation is $x=1$. Write down all the points that are shown on the line. _____
20. Drag the line downwards so that the equation is $x=0$. Write down all the points that are shown on the line. _____
21. Write down another name for this line. _____
22. The lines $x=3$, $x=1$, $x=0$, $x=-3$ are all... _____
23. Write down the equation of the line that passes through $(2,4)$ and $(2,-7)$. _____
24. Write down the equation of the line that passes through $(3,5)$ and $(-2,5)$. _____