Midpoint Formula

There are two ways to determine the midpoint of a segment: draw it out on the coordinate plane and visually find the middle , or use the midpoint formula. If you’re careful, the graph will find you the midpoint.



However, the fastest way to determine a midpoint is the midpoint formula*:* . All you have to do is add your *x*-values and divide by two, then add the *y*-values and divide by 2. For example, if I want the midpoint of (-4, 2) and (3, 4), as in the image above, I plug it in:

|  |
| --- |
| Midpoint Formula |
|  |

|  |  |  |
| --- | --- | --- |
| **EXAMPLE**  Find the midpoint of the line segment with endpoints and .  x’s: 3 & 9 y’s: 5 & 2 | **EXAMPLE**  Find the midpoint of the line segment with endpoints and .  x’s: 4 & 8 y’s: -1 & 7 | **EXAMPLE**  Find the midpoint of the line segment with endpoints and .  x’s: 11 & 5 y’s: 4 & 4 |
| 1. Find the midpoint of the line segment with endpoints and . | 2. Find the midpoint of the line segment with endpoints and . | 3. Find the midpoint of the line segment with endpoints and . |
| 4. Find the midpoint of the line segment with endpoints and . | 5. Find the midpoint of the line segment with endpoints and . | 6. Find the midpoint of the line segment with endpoints and . |
| 7. Find the midpoint of the line segment with endpoints and . | 8. Find the midpoint of the line segment with endpoints and . | 9. Find the midpoint of the line segment with endpoints and . |
| 10. Determine the midpoint of and . | 11. Determine the midpoint of and . | 12. Determine the midpoint of and . |
| 13. Determine the midpoint of and . | 14. Determine the midpoint of and . | 15. Determine the midpoint of and . |

|  |  |  |
| --- | --- | --- |
| 16. &  a. Determine .  b. Determine the midpoint of . | 17. &  a. Determine .  b. Determine the midpoint of . | 18. &  a. Determine .  b. Determine the midpoint of . |