

Directed Line Segment Worksheet

Name: _____

Directions: Find the partitioning point for each problem. You must show your work for all steps to receive credit.

1. Given the point A(-3, -2) and B(6, 1), find the coordinates of the point P on directed line segment AB that partition AB in the ratio 2:1. **$P(3,0)$**
2. Given the points A(-3, -4) and B(2, 0), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 2 to 3. **$P\left(-1, -\frac{12}{5}\right)$**
3. Given the points A(-2, 5) and B(2, 3), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 4 to 1. **$P\left(\frac{6}{5}, \frac{17}{5}\right)$**
4. Given the points A(5, -1) and B(-5, 3), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 1:3. **$P(2.5,0)$**
5. Given the points A(-2, 1) and B(4, 5), find the coordinates of the point P on directed line segment AB that partitions AB in the ratio 5:2. **$P\left(\frac{16}{7}, \frac{27}{7}\right)$**
6. Given the point A(-3, -2) and B(6, 1), find the coordinates of the point P on directed line segment **BA** that partition BA in the ratio 3:1. **$P\left(-\frac{3}{4}, -\frac{5}{4}\right)$**
7. Given the points A(-3, -4) and B(2, 0), find the coordinates of the point P on directed line segment **BA** that partitions BA in the ratio 1 to 4. **$P\left(-1, -\frac{4}{5}\right)$**
8. Given the points A(-2, 5) and B(2, 3), find the coordinates of the point P on directed line segment **BA** that partitions BA in the ratio 3 to 2. **$P\left(-\frac{2}{5}, \frac{21}{5}\right)$**
9. Given the points A(5, -1) and B(-5, 3), find the coordinates of the point P on directed line segment **BA** that partitions BA in the ratio 1:2. **$P\left(-\frac{5}{3}, \frac{5}{3}\right)$**
10. Given the points A(-2, 1) and B(4, 5), find the coordinates of the point P on directed line segment **BA** that partitions BA in the ratio 3:6. **$P\left(2, \frac{11}{3}\right)$**
11. Find the coordinates of P so that P partitions the segment AB in the ratio 5:1 if A(2, 4) and B(8, 10). **$P(7,9)$**
12. Find the coordinates of P so that P partitions the segment AB in the ratio 1 to 3 if A(-5, 4) and B(7, -4). **$P(-2,2)$**
13. Find the coordinates of P so that P partitions the segment AB in the ratio 3:4 if A(-9, -9) and B(5, -2). **$P(-3,-6)$**

14. Find the coordinates of P so that P partitions the segment AB in the ratio 5 to 2 if A(-8, -2) and B(6, 19).

$P(2, 13)$

15. Find the coordinates of P so that P partitions the segment AB in the ratio 7 to 2 if A(-5, 4) and B(-8, -2).

$P(-\frac{22}{3}, -\frac{2}{3})$