

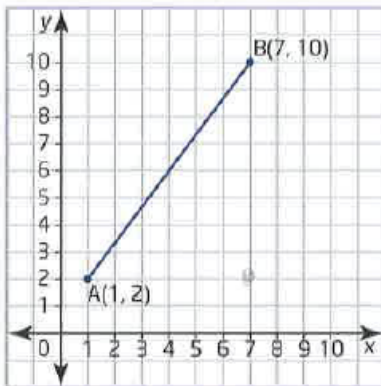
2.1 - Midpoint Worksheet

MPM2D

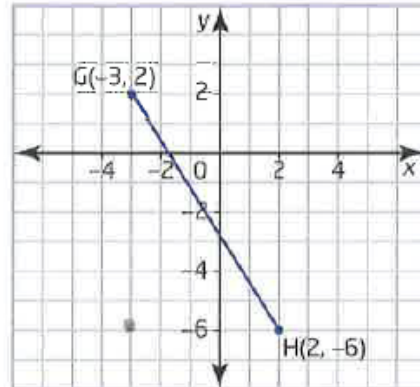
Jensen

1. Determine the midpoint of each line segment

a)



b)



2. Determine the midpoint of the line segment defined by each pair of endpoints.

a) J(5,7) and K(3,9)

b) L(-1,0) and M(1,-6)

c) N(-2,-4) and P(-2,8)

d) Q(-3,-3) and R(-1,-7)

3. Find the midpoint of the line segment with the given endpoints.

a) A(7,4) and B(9,-1)

b) A(8,-9) and B(0,5)

c) $A(1,-7)$ and $B(1,-12)$

d) $A(0,4)$ and $B(-4,-12)$

e) $A(-4,2)$ and $B(2,-3)$

f) $A(5,9)$ and $B(-1,9)$

g) $A(-7,8)$ and $B(-2,-9)$

h) $A(2,-11)$ and $B(-9,0)$

i) $A(4,-1)$ and $B(2,-7)$

j) $A(-4,-6)$ and $B(3,-6)$

k) $A(14,0)$ and $B(-7,5)$

l) $A(14,-8)$ and $B(12,-1)$

m) $A(-4,12)$ and $B(-7,-2)$

n) $A\left(\frac{-1}{9}, \frac{-1}{2}\right)$ and $B\left(\frac{14}{9}, \frac{4}{3}\right)$

o) $A\left(\frac{5}{3}, 1\right)$ and $B(0,2)$

p) $A\left(\frac{-3}{2}, \frac{-1}{3}\right)$ and $B\left(\frac{3}{4}, \frac{3}{5}\right)$

q) $A\left(\frac{2}{5}, \frac{-2}{5}\right)$ and $B\left(\frac{-7}{8}, \frac{-3}{5}\right)$

r) $A(6.6, 8.52)$ and $B(-5.5, 4.07)$

4. Given the midpoint and one endpoint of a line segment, find the other endpoint.

a) Endpoint: $(-9,-1)$, midpoint: $(8,14)$

b) Endpoint: $(10,12)$, midpoint: $(6,9)$

Answers:

1) a) (4,6) b) $(\frac{-1}{2}, -2)$

2) a) (4,8) b) (0,-3) c) (-2,2) d) (-2,-5)

3) a) $(8, \frac{3}{2})$ b) (4,-2) c) (1, -9.5) d) (-2,-4) e) (-1, -0.5) f) (2,9) g) (-4.5, -0.5) h) (-3.5, -5.5)

i) (3, -4) j) (-0.5, -6) k) (3.5, 2.5) l) $(13, \frac{-9}{2})$ m) $(\frac{-11}{2}, 5)$ n) $(\frac{13}{18}, \frac{5}{12})$ o) $(\frac{5}{6}, \frac{3}{2})$ p) $(\frac{-3}{8}, \frac{2}{15})$

q) $(\frac{-19}{80}, \frac{-1}{2})$ r) (0.549, 6.295)

4) a) (25,29) b) (2,6)