Finding the mid-point of a line

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Name:

Find the midpoint of the line with the following endpoints:

a) (4,7) and (6,9) **(5, 8)**

b) (1,7) and (3,9) **(2, 8)**

c) (2,1) and (6,7) **(4, 4)**

d) (2,0) and (4,4) **(3, 2)**

e) (5,3) and (9,13) **(7, 8)**

f) (0,2) and (4,8) **(2, 5)**

g) (0,1) and (6,11) **(3, 6)**

h) (-2,2) and (2,20) **(0, 11)**

i) (4,-5) and (-2,5) **(1, 0)**

j) (8,-3) and (-4,19) **(-2, 8)**

k) (-8,-2) and (6,20) **(-1, 18)**

l) (-2,6) and (-8,-4) **(-5, 1)**

m) (-3,-2) and (-5,8) **(-4, 3)**

n) (5,4) and (-3,-8) **(1, -2)**

Find the midpoint between the given 3D points

a) (0,1,6) and (2,7,10) **(1, 4, 8)**

b) (2,5,11) and (2,7,5) **(2, 6, 8)**

c) (-5,-2,4) and (-1,2,8) **(-3, 0, 6)**

d) (-3,0,8) and (3,2,-2) **(0, 1, 3)**

f) (-4,-7,-3) and (-8,1,-11) **(-6, -3, -7)**

f) (-4,15,-6) and (6,-7,10) **(1, 4, 2)**

Exam question:

The line AB passes through the points A = $(2k, -1)$ and B = $(6, k)$.

The midpoint of AB is (8, 3)

Work out the value of k.

$$\frac{2k+6}{2} = 8 \qquad 2k + 6 = 16 \qquad 2k = 10 \qquad k = 5$$