HW Quiz 1

1. **Find the value of the variable and *YZ* if *Y* is between *X* and *Z*.**

*XY* = 11, *YZ* = 4*c*, *XZ* = 83

*SOLUTION:*

Here *Y* is between *X* and *Z*.



So, *XZ* = *XY* + *YZ*.



So, *YZ* = 4*c* = 4(18) = 72.

*ANSWER:*

*c* = 18; *YZ* = 72

2. **Find the distance between each pair of points.**

*SOLUTION:*

Use the Distance Formula.



The distance between *J* and *K* is  or about 9.4units.

*ANSWER:*

or about 9.4 units

3. Find *X* on  such that the ratio of *JX* to *XK* is 1:2.

*SOLUTION:*

Since the ratio of the measure is 1:2,

2*JX* = *XK*. So, *JK* = *JX* + *XK* = *JX* + 2*JX* or 3*JX*. Thus, *JX* is of *JK*.

Find the distance between the *x*-coordinates of *J* and *K*.



Multiply the distances by the fractional distance.



Add this to the *x*-coordinate of *J* to determine the

*x*-coordinate of *X*.



The *x*-coordinate of *X* is 1.

Then, find the distance between the *y* -coordinates of *J* and *K*.



Multiply the distances by the fractional distance.



Add this to the *y* -coordinate of *J* to determine the *y*-coordinate of *X.*

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The *y* -coordinate of *X* is .

Thus, point *X* is located at 

*ANSWER:*

