Lesson Description

In this lesson we:

- Look at the application of the midpoint theorem

Summary

Mid-Point Theorem

The line joining the mid-points of two sides of a triangle is parallel to the third side of the triangle and equal to half the length of the third side.

Examples

Find $x$ and $y$ in the following:

(a) 

(b) 

Test Yourself

Question 1

Find $x$:

A. 4  
B. 3  
C. 5  
D. 10
Question 2

\[
\begin{align*}
x &= \\
&= \\
A. 
7 & B. 
28 & C. 
14 & D. 
12
\end{align*}
\]

Question 3

\[
\begin{align*}
\text{Find } x \text{ and } y \text{ respectively} \\
A. 
24 \text{ and } 12 & B. 
12 \text{ and } 24 & C. 
5 \text{ and } 13 & D. 
13 \text{ and } 5
\end{align*}
\]

Question 4

True or false: The line joining the mid-points of two sides of a triangle is parallel to and twice the length of the third side of the triangle.

Question 5

True or false: If a line is drawn through the mid-point of a side of a triangle parallel to the second side, it will bisect the third side.
Question 1

Triangle ABC is right-angled at A. D is the midpoint of AB, DE is parallel to BC and FD is perpendicular to AB.

Prove giving reasons:

a.) $AE = EC$

b.) $DF \parallel AC$

c.) $BF = FC$

Question 2

It is given that $AC \parallel MK$ in $\triangle LMK$ and $LA = AM$

Prove giving reasons:

a.) $B$ is the midpoint of $LN$

b.) $LC = CK$

c.) $BC = \frac{1}{2}NK$