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| **Notes – Midsegments**  | **Name:** |  |
| **Standard:**  | **Hour:** |

**Objective:** I know what a midsegment of a triangle is and its properties related to parallel segments and length.

**Definition**

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| A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ connects the midpoints of 2 sides of a polygon. Every triangle has 3 midsegments. |

**Examples**

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|  | 1. Name the 3 midsegments
 | 1. List the congruent segments
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**Theorem**

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| A midsegment of a triangle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the third side and \_\_\_\_\_\_\_\_\_\_\_ the length of the third side. |

**Examples**

Use the diagram in the theorem box. Assume F to be the midpoint of segment AC.

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| 1. Write the 3 parallel statements using each midsegment.
 | 1. Complete each congruence statement.

$$\overbar{DE}≅\\_\\_\\_\\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$$$\overbar{FE}≅\\_\\_\\_\\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$$$\overbar{DF}≅\\_\\_\\_\\_\\_\\_\\_\\_\\_≅\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$ |
| $\overbar{DE}$ is the midsegment of $∆ABC$. Find the value of x. |
| 1.

 | 1.

 | 1.

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**Practice**

Use the diagram for the next 4 problems. D, E, and F are midpoints.

|  |  |
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|  | 1. If $DE=4x+5$ and $GJ=3x+25$, find DE
 |
| 1. If $EF=2x+7$ and $GH=5x-1$, find EF.
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| 1. If $HJ=8x-2$ and $DF=2x+11$, find HE.
 | 1. If $HD=3x+29$ and $DG=14x+7$, find EF.
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