**Homework – Midsegments** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

$\overbar{DE}$ is the midsegment of $∆ABC$. Find the value of x.

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| 1.

 | 1.

 | 1.

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In $∆XYZ$, $\overbar{XJ}≅\overbar{JY}$, $\overbar{YL}≅\overbar{LZ}$, and $\overbar{XK}≅\overbar{KZ}.$ Complete each statement.

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| 1. $\overbar{JK}∥$ \_\_\_\_\_
 | 1. $\overbar{JL}∥$ \_\_\_\_\_
 |  |
| 1. $\overbar{XY}∥$ \_\_\_\_\_
 | 1. $\overbar{YJ}≅\\_\\_\\_\\_\\_\\_\\_\\_\\_ ≅\\_\\_\\_\\_\\_\\_\\_\\_\\_$
 |  |
| 1. $\overbar{JL}≅\\_\\_\\_\\_\\_\\_\\_\\_\\_ ≅\\_\\_\\_\\_\\_\\_\\_\\_\\_$
 | 1. $\overbar{JK}≅\\_\\_\\_\\_\\_\\_\\_\\_\\_ ≅\\_\\_\\_\\_\\_\\_\\_\\_\\_$
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Prior Knowledge and Making Connections – Use the diagram to complete the statements and provide a reason (angle relationship).

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| 1. $∠G≅∠BAH$ because:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| 1. $∠J+∠ABJ=180°$ because:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| 1. $∠JCB≅∠CBA$ because:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| 1. $∠J+∠G+∠H=180°$ because:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |

Use $∆GHJ$, where A, B, and C are midpoints of the sides.

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| 1. If $AB=3x+8$ and$GJ=2x+24$, what is AB?
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| 1. If $AC=3y-5$ and $HJ=4y+2$, what is HB?
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| 1. If $GH=7z-1$ and $BC=4z-3$, what is GH?
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| 1.

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| 1. $\overbar{DE}$ is the midsegment of which triangle?
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| 1. What are the midpoints of $\overbar{AB}$ and $\overbar{BC}$?
 |
| 1. What is the length of $\overbar{AC}$?
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