1. Find the coordinates of the centroid of triangle ABC with vertices located at $\mathrm{A}(-2,3) \mathrm{B}(1,5)$ and $\mathrm{C}(2,-4)$
2. $\mathrm{JB}, \mathrm{HD}$, and IC are medians of $\Delta J H I$. If $\mathrm{DH}=24$ and $\mathrm{JD}=10$, find the lengths of DT and JI .

3. Identify which points among A, B, and C are the the orthocenter, circumcenter, and incenter. Explain how you know for each classification.


SRT-B5b
Complete the proof using the choices provided. Use as many steps as needed.


GIVEN: $\overline{A B} \| \overline{C D}$ and $\overline{B C} \| \overline{D A}$
PROVE: $\overline{A B} \cong \overline{C D}$

Statements
Reasons

1. $\overline{A B} \| \overline{C D}$ and $\overline{B C} \| \overline{D A}$
2. Given

Choices:

Vertical Angles
Reflexive Property
$\overline{D B} \cong \overline{B D}$
CPCTC

Alternate Interior Angles
ASA
$\angle 1 \cong \angle 4$ and $\angle 2 \cong \angle 3$
$\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$
$\overline{A B} \cong \overline{C D}$
$\triangle A B D \cong \triangle C D B$
$\Delta B D A \cong \triangle B D C$
SSS HL Def of bisect
AAS
ex $\angle A \cong \angle C$

AAA
SSA

