



Centers

We are...

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Focusing Activity

Ruler Balance

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Place pennies on the ruler, but not at the fulcrum.

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Place pennies on the ruler, but not at the fulcrum.

- With the fulcrum in the center, where can the pennies be placed for balance?

Focusing Activity

Ruler Balance

Place pennies on the ruler, but not at the fulcrum.

- With the fulcrum in the center, where can the pennies be placed for balance?
- What if there are 3 pennies?

Statistical Centers

Mean

Median

Mode

Weight Stand

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Placing banded weights on either side of the center so that the cross-bar is horizontal.

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- If we place a 1-weight band and a 2-weight band, where should they be?

Weight Stand

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- If we place a 1-weight band and a 2-weight band, where should they be?
- What if they were a 2-weight band and a 3-weight band?

Moving the Fulcrum

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Placing weights of equal measure on the ends of the bar

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- Where should the fulcrum be if there is 1 weight on each end?

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- Where should the fulcrum be if there is 1 weight on each end?
- What if there are 2 weights on one end and 1 on the other?

Moving the Fulcrum

Placing weights of equal measure on the ends of the bar

- Where should the fulcrum be if there is 1 weight on each end?
- What if there are 2 weights on one end and 1 on the other?
- What if there are 3, 4 or 8 weights on one end and 1 on the other?

Geometric Centers

Median

Centroid

Finding the Balance Point of Polygons:
Triangles, Quadrilaterals, and beyond

Using Coordinate Grids

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Graph the points $(1,5)$, $(5,1)$

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- Find the midpoint

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Add the point $(3,6)$

- Find the centroid

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Make a conjecture about finding the balance point of a graphed polygon.

Using Coordinate Grids

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- Find the midpoint

Add the point $(3,6)$

- Find the centroid

Make a conjecture about finding the balance point of a graphed polygon.

Test the conjecture using points $(3,4)$, $(12,7)$, $(6,13)$.

Center of Gravity—Balance



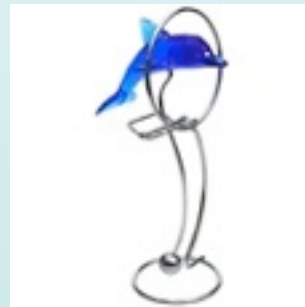
Center of Gravity—Architecture



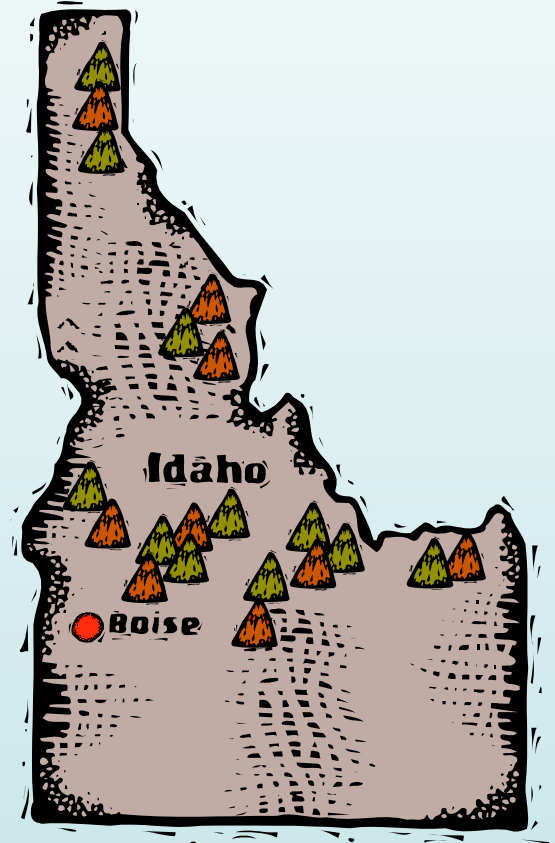
Rose Seidler House, Australia



Center of Gravity—Toys



Centers of Population





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