

Parallelogram - 1

Construct a Parallelogram - 2 sides & angle

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1. Generate side lengths and angle between.
 - Click on the New Dimensions button (and wait 2 secs).

REMEMBER: You can always click on  (top right) to undo your last action.

2. Make the base of your parallelogram.

- Click on  "Segment with given length from point" icon.
- Then click on the point A (it will glow) and In the box type the number of the base of your parallelogram. Hit Enter.

3. Construct the given angle with the base.

- Click on  "Angle with given size" icon.
- Click on point B, then on point A and erase 45 and type in the value of the angle. Leave the $^{\circ}$ and hit Enter. If you erase the degree sign, you must get another by clicking on the arrow to the right of .
- Click on  "Line through 2 points" icon and then on A and then on C to get the left line.

4. Now we need the point on the left line that is the length of the side of the parallelogram so we draw a circle with center A and radius the side length. The intersection between the circle and the line is the point we need.

- Click on  "Circle with center and radius" icon. Click on A and then type in the value of the side of your parallelogram.
- Click on  "Intersect two objects" icon and then click on the line and then on the circle. Vertex E will be drawn.

5. Draw the other 2 sides of the parallelogram. Remember, opposite sides are parallel.

- Click on  "Parallel line" icon. Click on point C, then on line AB. Click on point B, then on line AE.

6. Find the 4th vertex of the parallelogram. It is the intersection of the two lines we have just drawn.

- Click on  then on the top line and then on the right side.

7. Close your parallelogram AEFB.

- Click on  "Segment between two points" icon. Click on A and E. Click on E and then F. Click on F and then B.

8. Clean up

- Right-click on the circles and lines not part of the parallelogram and deselect "Show object".

9. Notice that we do not know the height of the parallelogram so we cannot calculate its area! (We can calculate the perimeter.)

10. Play with your parallelogram.

- Click and drag any blue point (A moves the parallelogram, B rotates the parallelogram). Notice that the parallelogram itself never changes since it is completely defined by the length of the two adjacent sides and the angle between them.

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- Click on Reset to start over.

Database Information

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| CA Strand | 3 |
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