

Measures and Sums of Internal Angles of Polygons

1. Find the sum of the internal angles of the following polygons.

- a. Triangle _____
- b. Octagon _____
- c. Square _____
- d. Trapezoid _____

2. Identify if the given set of angles can form a triangle. Write Yes or No.

- a. $32^\circ, 42^\circ, 106^\circ$ _____
- b. $110^\circ, 45^\circ, 20^\circ$ _____
- c. $109^\circ, 23^\circ, 48^\circ$ _____
- d. $37^\circ, 87^\circ, 56^\circ$ _____
- e. $112^\circ, 20^\circ, 50^\circ$ _____
- f. $45^\circ, 35^\circ, 105^\circ$ _____

3. Identify if the given set of angles can form a quadrilateral. Write Yes or No.

- a. $87^\circ, 87^\circ, 93^\circ, 93^\circ$ _____
- b. $90^\circ, 30^\circ, 60^\circ, 195^\circ$ _____
- c. $146^\circ, 146^\circ, 35^\circ, 35^\circ$ _____
- d. $146^\circ, 34^\circ, 34^\circ, 146^\circ$ _____
- e. $139^\circ, 139^\circ, 41^\circ, 41^\circ$ _____
- f. $115^\circ, 115^\circ, 64^\circ, 64^\circ$ _____

4. Find the sum of the internal angles of the following polygons.



5. The measures of the two angles of a triangle are 30° and 60° . Find the third angle.

Solution:

6. One of the angles of a rhombus measures 64° . Find the measures of the other three angles.

Solution:

7. Write the sum of the internal angles of the polygon below.



Solution:

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Answer Key

1.

- a. 180^0
- b. 1080^0
- c. 360^0
- d. 360^0

2.

- a. Yes
- b. No
- c. Yes
- d. Yes
- e. No
- f. No

3.

- a. Yes
- b. No
- c. No
- d. Yes
- e. Yes
- f. No

4. $720^0, 540^0$ 5. 90^0 6. $64^0, 116^0, 116^0$ 7. 360^0