

Name: _____

Grade: _____

Score: _____

Worksheet #3



SUM OF INTERIOR ANGLES FOR POLYGONS

Learning goal: Students will be able to calculate the sum of interior angles for any regular polygon using the formula.

Workout the sum of interior angles of polygon

a) 10 sides

b) 14 sides

c) 20 sides

d) 45 sides

e) 50 sides

f) 80 sides

g) 100 sides

h) 200 sides

Name: _____

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Worksheet #3(Answers)



SUM OF INTERIOR ANGLES FOR POLYGONS

Learning goal: Students will be able to calculate the sum of interior angles for any regular polygon using the formula.

Workout the sum of interior angles of polygon

a) 10 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (10 - 2) \times 180^\circ \\ &= 8 \times 180^\circ \\ &= 1440^\circ \end{aligned}$$

b) 14 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (14 - 2) \times 180^\circ \\ &= 12 \times 180^\circ \\ &= 2160^\circ \end{aligned}$$

c) 20 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (20 - 2) \times 180^\circ \\ &= 18 \times 180^\circ \\ &= 3240^\circ \end{aligned}$$

d) 45 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (45 - 2) \times 180^\circ \\ &= 43 \times 180^\circ \\ &= 7740^\circ \end{aligned}$$

e) 50 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (50 - 2) \times 180^\circ \\ &= 48 \times 180^\circ \\ &= 8640^\circ \end{aligned}$$

f) 80 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (80 - 2) \times 180^\circ \\ &= 78 \times 180^\circ \\ &= 14040^\circ \end{aligned}$$

g) 100 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (100 - 2) \times 180^\circ \\ &= 98 \times 180^\circ \\ &= 17640^\circ \end{aligned}$$

h) 200 sides

Solution:

$$\begin{aligned} &= (n - 2) \times 180^\circ \\ &= (200 - 2) \times 180^\circ \\ &= 198 \times 180^\circ \\ &= 35640^\circ \end{aligned}$$