

Name: _____

Grade: _____

Score: _____

Worksheet #4



NUMBER OF SIDES OF POLYGONS

Learning goal: Students will be able to solve real-world problems using adjacent angle properties and apply adjacent angle concepts to practical situations

Workout the Number of Sides from Interior Angle Sums

a) 1260°

b) 2880°

c) 3960°

d) 5040°

e) 12240°

f) 15840°

g) 2340°

h) 89640°

Name:

Grade:

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Worksheet #4(Answers)



NUMBER OF SIDES OF POLYGONS

Learning goal: Students will be able to solve real-world problems using adjacent angle properties and apply adjacent angle concepts to practical situations

Workout the Number of Sides from Interior Angle Sums

a) 1260°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(1260 \div 180) + 2 &= \\= 7 + 2 &= \\= 9 \text{ sides} &= \end{aligned}$$

b) 2880°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(2880 \div 180) + 2 &= \\= 16 + 2 &= \\= 18 \text{ sides} &= \end{aligned}$$

c) 3960°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(3960 \div 180) + 2 &= \\= 22 + 2 &= \\= 24 \text{ sides} &= \end{aligned}$$

d) 5040°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(5040 \div 180) + 2 &= \\= 28 + 2 &= \\= 30 \text{ sides} &= \end{aligned}$$

e) 12240°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(12240 \div 180) + 2 &= \\= 68 + 2 &= \\= 70 \text{ sides} &= \end{aligned}$$

f) 15840°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(15840 \div 180) + 2 &= \\= 88 + 2 &= \\= 90 \text{ sides} &= \end{aligned}$$

g) 2340°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(2340 \div 180) + 2 &= \\= 13 + 2 &= \\= 15 \text{ sides} &= \end{aligned}$$

h) 89640°

Solution:

$$\begin{aligned}(n) &= \\(\text{Sum of Interior Angles} \div 180^\circ) + 2 &= \\(89640 \div 180) + 2 &= \\= 498 + 2 &= \\= 500 \text{ sides} &= \end{aligned}$$