

GRADE 9

PREPARATION

FOR

E. Q. A. O.

(WITH COMPLETE SOLUTIONS)

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CONTENTS

The questions in this book are similar to the questions that have been asked in E.Q.A.O. assessments from 2005 to 2009. There are 40 multiple-choice questions and 10 open-response questions (which require detailed solutions). Complete solutions to all of these questions are found on the back of each page.

Multiple Choice

7. What is the equation of the line that passes through the points $(2,2)$ and $(3,0)$.

a) $y = -\frac{1}{2}x + 3$

b) $y = 2x - 6$

c) $y = -\frac{1}{2}x + 6$

d) $y = -2x + 6$

8. What is the measure in degrees of the size of an interior angle of a 10-sided regular polygon?

a) 36°

b) 144°

c) 135°

d) 45°

Solutions

7. What is the equation of the line that passes through the points (2,2) and (3,0)?

a) $y = -\frac{1}{2}x + 3$

b) $y = 2x - 6$

c) $y = -\frac{1}{2}x + 6$

d) $y = -2x + 6$

Solution:

Find the slope

$$\begin{aligned} m &= \frac{2-0}{2-3} & \text{or } m &= \frac{0-2}{3-2} \\ &= \frac{2}{-1} & &= \frac{-2}{1} \\ &= -2 & &= -2 \end{aligned}$$

The equation of the line is $y = -2x + b$

To find b substitute (2,2)

$$\begin{aligned} 2 &= -2(2) + b \\ 2 &= -4 + b \\ 2 + 4 &= b \\ 6 &= b \end{aligned}$$

$$\therefore y = -2x + 6$$

Answer: d) $y = -2x + 6$

8. What is the measure in degrees of the size of an interior angle of a 10-sided regular polygon?

a) 36°

b) 144°

c) 135°

d) 45°

Solution:

A 10-sided polygon can be divided into 8 triangles. Therefore the sum of the interior angles is 8×180 or 1440° .

Each of the 10 interior angles would be $\frac{1440}{10}$ or 144° .

OR Since the sum of the exterior angles of any polygon is 360° , the size of an exterior angle is $\frac{360}{10}$ or 36° .

Subtracting 36° from 180° you get an interior angle of 144° .

Answer: b) 144°