

Mathematics 9: 1st Term Examination Reviewer

Mathematics · Answer Key · 37 Questions

1. Which term describes $\angle 2$ and $\angle 3$?

- A) Same-side interior angles
- B) Corresponding angles
- C) Alternate interior angles**
- D) Vertical angles

2. Which pair represents corresponding angles?

- A) $\angle 2$ and $\angle 7$**
- B) $\angle 3$ and $\angle 2$
- C) $\angle 4$ and $\angle 2$
- D) $\angle 1$ and $\angle 3$

3. Which pair represents alternate interior angles?

- A) $\angle 1$ and $\angle 7$
- B) $\angle 2$ and $\angle 3$**
- C) $\angle 4$ and $\angle 8$
- D) $\angle 5$ and $\angle 7$

4. What is the relationship between $\angle 4$ and $\angle 2$?

- A) Corresponding angles
- B) Vertical angles
- C) Same-side interior angles**
- D) Alternate interior angles

5. Two angles are complementary when their measures have a sum of:

- A) 270°
- B) 90°**
- C) 360°
- D) 180°

6. What is the sum of supplementary angles?

- A) 180°**
- B) 360°
- C) 90°
- D) 270°

7. If $m\angle 5 = 118^\circ$, what is $m\angle 7$?

- A) 62°
- B) 72°
- C) 118°**
- D) 180°

8. If $m\angle 4 = 132^\circ$, what is $m\angle 7$?

- A) 48°**
- B) 58°
- C) 132°
- D) 180°

9. Which expression correctly defines the slope of a nonvertical line?

- A) Change in x divided by change in y
- B) Change in y divided by change in x**
- C) Product of the intercepts
- D) Number of points on the line

10. In the equation $y = -2x + 7$, what is the y-intercept?

- A) -2
- B) x
- C) 7**
- D) -2x

11. Determine the slope of the line passing through (-2, 8) and (2, -4).

- A) 3
- B) -3**
- C) -2
- D) 2

12. Which equation has a slope of -3 and an x-intercept of 4?

- A) $y = 3x - 12$
- B) $y = -3x - 12$
- C) $y = -3x + 12$**
- D) $y = 3x + 12$

13. When solving a linear equation by setting $y = 0$, what are you finding?

- A) y-intercept
- B) Slope
- C) Range
- D) x-intercept**

14. A delivery service uses $C = 12d + 40$. What does 40 represent?

A) The initial fee before distance is added

B) The cost per kilometer

C) The total distance traveled

D) The final delivery cost

15. A computer shop charges a fixed fee of PHP40 plus PHP10 per hour. If a student has PHP120, which equation determines h ?

A) $40h + 10 = 120$

B) $10h + 40 = 120$

C) $120h + 10 = 40$

D) $10h - 40 = 120$

16. Using $10h + 40 = 120$, why is 8 hours the greatest possible whole-number answer?

A) Eight hours is the first possible value.

B) Eight hours makes the membership fee zero.

C) Eight hours costs PHP120, while 9 hours costs more than the budget.

D) Eight hours gives the largest unused amount.

17. Solve: $5x + 7 = 32$

A) 25

B) 7

C) 5

D) 3

18. Two nonvertical lines are parallel if they have:

A) equal slopes

B) opposite y-intercepts

C) reciprocal slopes

D) slopes whose product is -1

19. Which condition guarantees that two distinct lines are perpendicular?

A) Their slopes are equal.

B) Their slopes have a product of -1.

C) Their y-intercepts are equal.

D) Their x-intercepts are equal.

20. A line has a slope of $-3/5$. What is the slope of a line parallel to it?

A) $5/3$

B) $-5/3$

C) $3/5$

D) $-3/5$

21. Line r is $y = -4x + 3$. Line s is $y = \frac{1}{4}x - 7$. What conclusion is justified?

- A) The lines are parallel.
- B) The lines are perpendicular.**
- C) The lines are the same line.
- D) The lines have equal y -intercepts.

22. Which polygon has exactly four sides, four angles, and four vertices?

- A) Triangle
- B) Circle
- C) Quadrilateral**
- D) Pentagon

23. A quadrilateral with two pairs of opposite sides parallel is called a:

- A) Kite
- B) Trapezoid
- C) Parallelogram**
- D) Pentagon

24. Why is every square a rhombus, but not every rhombus a square?

- A) A rhombus has no congruent sides.
- B) A square has four congruent sides and four right angles, while a rhombus does not necessarily have right angles.**
- C) A square has only two congruent sides.
- D) A rhombus has no parallel sides.

25. A quadrilateral has two pairs of parallel sides and four congruent sides, but no right angles are given. What is its most specific classification?

- A) Rectangle
- B) Rhombus**
- C) Kite
- D) Trapezoid

26. What is the sum of the interior angles of a quadrilateral?

- A) 360°**
- B) 90°
- C) 270°
- D) 180°

27. Three angles of a quadrilateral measure 72° , 91° , and 84° . What is the fourth angle?

A) 103°

B) 113°

C) 123°

D) 93°

28. Which property of the diagonals of a parallelogram is always true?

A) They are always perpendicular.

B) They always have equal lengths.

C) They bisect each other.

D) They form four right angles.

29. In parallelogram PQRS, diagonals PR and QS intersect at O. If $PO = 4x - 3$ and $OR = 21$, what is x ?

A) 4

B) 5

C) 6

D) 7

30. In parallelogram RSTU, $m\angle R = 68^\circ$. What is $m\angle S$?

A) 68°

B) 112°

C) 90°

D) 122°

31. Opposite sides of a parallelogram are represented by $5x + 2$ and 32. Find x .

A) 5

B) 6

C) 7

D) 8

32. Which is NOT always a property of a parallelogram?

A) Opposite sides are congruent.

B) Opposite angles are congruent.

C) Diagonals bisect each other.

D) Diagonals are always congruent.

33. Which statement is NOT necessarily true about parallelogram ABCD?

- A) $AB \cong CD$
- B) $BC \cong AD$
- C) AC is perpendicular to BD**
- D) The diagonals bisect each other.

34. In parallelogram ABCD, if $DC = 22$, what is AB ?

- A) 11
- B) 22**
- C) 44
- D) 14

35. If $EC = 14$ in parallelogram ABCD, how long is AC?

- A) 7
- B) 14
- C) 28**
- D) 42

36. If $\angle BAC = 48^\circ$ and $AB \parallel DC$, what is the angle formed by DC and AC at C?

- A) 32°
- B) 42°
- C) 48°**
- D) 90°

37. In parallelogram ABCD, if $\angle A = 80^\circ$, what is $\angle B$?

- A) 80°
- B) 90°
- C) 100°**
- D) 120°