

**FIRST QUARTERLY EXAMINATION**  
**GRADE 7 – MATHEMATICS**  
School Year 2024-2025

NAME: \_\_\_\_\_ SECTION: \_\_\_\_\_ SCORE: \_\_\_\_\_

**Part I. Directions:** Read and understand every item. Shade the circle which corresponds to your answer.

**1. It is a closed plane figure that has no curves, no spaces and has vertices, angles, and straight sides.**

A. angles      B. concave      C. convex      D. polygon

**2. Which of the following pairs of angles is complementary?**

A.  $45^\circ$  and  $55^\circ$       C.  $30^\circ$  and  $60^\circ$   
B.  $60^\circ$  and  $120^\circ$       D.  $90^\circ$  and  $90^\circ$

**3. What is the measure of the supplementary angle of a  $70^\circ$  angle?**

A.  $100^\circ$       B.  $110^\circ$       C.  $120^\circ$       D.  $130^\circ$

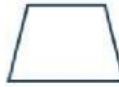
**4. Two angles form a linear pair, and one of them measures  $75^\circ$ . What is the measure of the other angle?**

A.  $15^\circ$       B.  $75^\circ$       C.  $105^\circ$       D.  $135^\circ$

**5. How many sides does a pentagon have?**

A. 5      B. 6      C. 7      D. 8

**6. Which of the following is a convex polygon?**

A.  B.  C.  D. 

**7. Select the best description of a regular polygon.**

A. A pentagon with all sides and angles equal.  
B. A quadrilateral with two pairs of equal sides.  
C. A triangle with sides of 3 cm, 4 cm, and 5 cm.  
D. A hexagon with one side longer than the others.

**8. Which statement is true about convex polygons**

A. All interior angles are equal to  $180^\circ$ .  
B. All interior angles are less than  $180^\circ$ .  
C. The polygon must have more than four sides.  
D. At least one interior angle is greater than  $180^\circ$ .

**9. You are given a polygon with 8 sides. It has one interior angle greater than 180°. How would you classify this polygon?**

A. Regular and Convex      C. Regular and Non-Convex  
B. Irregular and Convex      D. Irregular and Non-Convex

**10. What is the relationship between an exterior angle and its adjacent interior angle in a polygon?**

A. The sum is 90°.      C. The difference is 90°.  
B. The sum is 180°.      D. The difference is 180°

**11. A carpenter is building a regular hexagonal table. If each exterior angle of the table is 120°, what is the measure of each interior angle of the table?**

A. 60°      B. 90°      C. 120°      D. 150°

**12. A school playground has a sign shaped like a regular polygon. If each exterior angle of the sign measures 45°, how many sides does the polygon have, and what can you infer about the shape of the sign?**

A. The polygon has 6 sides; it is a hexagon.  
B. The polygon has 8 sides; it is an octagon.  
C. The polygon has 5 sides; it is a pentagon.  
D. The polygon has 12 sides; it is a dodecagon

**13. How do you find the measure of each interior angle in a regular polygon?**

A. Divide 180° by the number of sides.  
B. Divide 360° by the number of sides.  
C. Subtract the number of sides from 180°.  
D. Multiply the difference between the number of sides and 2 by 180°, then divide the result by the number of sides.

**14. A playground has a sign in the shape of a regular decagon. What is the measure of each interior angle of the sign?**

A. 120°      B. 135°      C. 144°      D. 150°

**15. A building has a roof shaped like a regular polygon where each exterior angle measures 45°. The architect claims the roof is a regular octagon. Is this claim correct, and what is the measure of each interior angle?**

A. Yes; each interior measures 135°.      C. Yes; each interior measures 144°.  
B. No; each interior measures 120°.      D. No; each interior measures 150°.

**16. What is the sum of the exterior angles of any polygon?**

A. 90°      B. 180°      C. 360°      D. Depends on the number of sides

**17. How many sides does a regular pentagon have?**

A. 4      B. 5      C. 6      D. 7

**18. What happens to the size of each interior angle as the number of sides in a regular polygon increases?**

A. The angle stays the same.  
B. The angle becomes smaller.  
C. The angle becomes larger.  
D. The angle becomes  $90^\circ$ .

**19. Angelo wants to calculate the percentage increase in the price of a snack that used to cost 35 pesos but now costs 40 pesos. What formula should he use?**

A.  $\frac{\text{Original value}}{\text{New value}} \times 100\%$   
B.  $\frac{\text{New value}}{\text{Original value}} \times 100\%$   
C.  $\frac{\text{New value} - \text{Original value}}{\text{Original value}} \times 100\%$   
D.  $\frac{\text{Original value} - \text{New value}}{\text{Original value}} \times 100\%$

**20. If the price of a book increased from ₱200 to ₱250, what is the percentage increase?**

A. 20%  
B. 25%  
C. 30%  
D. 40%

**21. A pair of shoes originally cost ₱1,000 but is now on sale for ₱800. By how much has the cost decreased?**

A. 200  
B. 300  
C. 400  
D. 500

**22. A student's score improved from 75% to 90%. What is the percentage increase in the student's score, and how does this reflect the improvement?**

A. 15%; Minor improvement  
B. 20%; Moderate improvement  
C. 25%; Significant improvement  
D. 30%; Substantial improvement

**23. What is the term used to describe the amount of money saved when an item is sold for less than its original price?**

A. Commission  
B. Discount  
C. Interest  
D. Sales tax

**24. What is the term used to describe the amount of money that a company charges for its product?**

A. Commission  
B. Discount  
C. Interest  
D. Sales tax

**25. If a ₱1,000 item is on sale with a 15% discount, how much is the discount?**

A. ₱100  
B. ₱150  
C. ₱200  
D. ₱250

**26. You bought a laptop that originally costs ₱30,000. If the store offered a 10% discount, how much did you pay for the laptop?**

A. ₱27,000  
B. ₱28,000  
C. ₱29,000  
D. ₱30,000

**27. Jessa wants to buy a cellphone worth ₱10,000. She is offered two payment options: Option A: 10% discount if paid in full. Option B: Pay in 3 monthly installments of ₱3,800, with no upfront discount. Which option is better, and why?**

- A. Option A, because it gives an immediate savings of ₱1,000.
- B. Option B, because paying in installments is easier and totals a lower cost.
- C. Option A, because the full payment lets her avoid hidden interest charges.
- D. Option B, because the total cost is the same and she doesn't need to pay right away.

**28. Which of the following is an example of a rate?**

- A. 25%
- B. 45 students
- C. 10 apples
- D. 60 kilometers per hour

**29. A worker is paid ₱640 for 8 hours of work. What is the hourly rate?**

- A. ₱60 per hour
- B. ₱68 per hour
- C. ₱75 per hour
- D. ₱80 per hour

**30. A mother is looking for a tutor for her 4 children. Tutor A charges ₱300 per hour for 2 students. Tutor B charges ₱500 per hour for 4 students. Which tutor gives a lower cost per student, and should your mom choose that tutor?**

- A. Tutor A; Yes, because each student pays only ₱150
- B. Tutor B; Yes, because each student pays only ₱125.
- C. Tutor A; No, because each student pays more.
- D. Tutor B; No, because each student pays more.

**31. If a car travels 120 kilometers in 2 hours, what is its average speed?**

- A. 40 km/h
- B. 60 km/h
- C. 80 km/h
- D. 100 km/h

**32. A cyclist covers a distance of 45 kilometers in 3 hours. How long will it take the cyclist to cover 90 kilometers at the same speed?**

- A. 3 hours
- B. 4 hours
- C. 6 hours
- D. 9 hours

**33. Ana jogs 6 kilometers in 1 hour. What does her rate tell us?**

- A. Ana can jog 6 kilometers without stopping.
- B. Ana's speed is 6 kilometers per hour.
- C. Ana jogs faster than her friends.
- D. Ana jogs for only 1 hour each day.

**34. A store sells 3 notebooks for ₱60. What does this rate mean?**

- A. The store earns ₱60 for every notebook.
- B. You can buy 6 notebooks for ₱60.
- C. Each notebook costs ₱20.
- D. ₱60 is the discount for all notebooks.

**35. A car travels 100 kilometers in 2 hours on a flat road. If the same car travels 80 kilometers in 2 hours on a hilly road, how does its speed on the hilly road compare to its speed on the flat road?**

A. It's faster.  
B. It's slower.  
C. It's the same.  
D. It's twice as fast.

**36. What is the decimal form of the fraction 1/2?**

A. 0.25      B. 0.50      C. 1.25      D. 2.00

**37. Choose the decimal form that represents 7/10.**

A. 0.7      B. 0.75      C. 0.70      D. 0.07

**38. Compare the fractions 4/5 and 7/10. Which is greater?**

A. 4/5      C. Both are equal  
B. 7/10      D. Cannot be determined

**39. What does it mean when we say that 0.5, 1/2, and 50% are the same?**

A. They are all greater than 1.  
B. They are all written as fractions.  
C. They are written differently but show the same amount.  
D. They cannot be compared because they are in different forms.

**40. Which group contains numbers that do NOT represent the same value?**

A. 0.2, 1/5, 20%      C. 0.5, 1/2, 50%  
B. 0.13, 1/5, 23%      D. 0.75, 3/4, 75%

**41. Find the sum of  $\frac{2}{5}$  and  $\frac{3}{10}$ .**

A.  $\frac{5}{10}$       B.  $\frac{6}{10}$       C.  $\frac{7}{10}$       D.  $\frac{9}{10}$

**42. Which of the following represents the result of  $\frac{3}{4} \times \frac{2}{3}$ ?**

A.  $\frac{5}{12}$       B.  $\frac{6}{7}$       C.  $\frac{1}{3}$       D.  $\frac{1}{2}$

**43. If  $\frac{2}{3}$  is increased by  $\frac{1}{6}$ , what is the total increase?**

A.  $\frac{5}{6}$       B.  $\frac{3}{6}$       C.  $\frac{7}{12}$       D.  $\frac{7}{6}$

**44. Which expression gives a result equal to 1?**

A.  $\frac{5}{6} \times \frac{2}{3}$       B.  $\frac{3}{5} + \frac{2}{5}$       C.  $\frac{7}{10} - \frac{3}{10}$       D.  $\frac{4}{9} \div \frac{1}{2}$

**45. What is the result of  $3/4 \div 1/2$ ?**

A.  $\frac{1}{2}$       B.  $\frac{3}{8}$       C.  $1 \frac{1}{2}$       D.  $\frac{2}{3}$

**46-50. Plot the following rational numbers on the number line. Label each point using the correct letter from the list below.**

- A. 1
- B.  $\frac{1}{2}$
- C. 5
- D. 1.25
- E. 3.33

