



Republic of the Philippines
Department of Education
REGION IV-A CALABARZON
SCHOOLS DIVISION OF RIZAL
RODRIGUEZ SUB-OFFICE

2nd Quarter Periodical Test in Mathematics 9

Name: _____ Score: _____

Grade and Section: _____ Date: _____

Direction: Read and analyze the given statements below. Choose the correct answer and write the letter on the space provided before each number.

- _____ 1. Which is an example of a direct variation?
A. $xy = 10$ B. $y = \frac{2}{x}$ C. $y = 5x$ D. $\frac{2}{y} = x$
- _____ 2. The speed **r** of a moving object is inversely proportional to the time **t** travelled is written as?
A. $r = kt$ B. $r = \frac{k}{t}$ C. $t = kr$ D. $\frac{r}{k} = t$
- _____ 3. A car travels a distance of **d** km in **t** hours. The formula that relates **d** to **t** is **d = kt**. What kind of variation is it?
A. direct B. inverse C. joint D. combined
- _____ 4. **Y** varies directly as **x** and **y** = 32 when **x** = 4. Find the constant of variation.
A. 8 B. 36 C. 28 D. 128
- _____ 5. If **y** varies inversely as **x** and **y** = 20 when **x** = 8, find **y** when **x** = 16.
A. 10 B. 20 C. 30 D. 40
- _____ 6. If **m** varies jointly as **p** and **q** and **m** = 50 when **p** = 5 and **q** = 2, find **m** when **p** = 10 and **q** = 6.
A. 100 B. 200 C. 300 D. 400
- _____ 7. **V** varies inversely to **x** and directly to **w**. If **y** = 12 when **x** = 4 and **w** = 8, find **w** when **y** = 24 and **x** = 2?
A. 10 B. 11 C. 12 D. 13
- _____ 8. If **p** varies directly as the square of **q** and inversely as the square root of **r**, and **p** = 20 when **q** = 2 and **r** = 64, find **p** when **q** = 8 and **r** = 144?
A. $\frac{240}{3}$ B. $\frac{340}{3}$ C. $\frac{540}{3}$ D. $\frac{640}{3}$
- _____ 9. A mailman can sort out 738 letters in 6 hours. If the number of sorted letters varies directly as the number of working hours, how many letters can be sorted in 9 hours?
A. 1105 B. 1106 C. 1107 D. 1108
- _____ 10. The number of days needed in repairing a house varies inversely as the number of men working. It takes 15 days for 2 men to repair the house. How many men are needed to complete the job in 6 days?
A. 3 B. 4 C. 5 D. 6
- _____ 11. The area of a triangle varies jointly as the base and the height. A triangle with the base 8 cm and a height of 9 cm has an area 36 cm². Find the area when the base is 16 cm, and the height is 7 cm?
A. 20 cm² B. 25 cm² C. 30 cm² D. 35 cm²

- _____ 12. Which of the following is the simplified form of $5(-6)^0$?
 A. 5 B. 15 C. 25 D. 30
- _____ 13. Which of the following is equivalent to $4(6^0) + 3(3^{-1})$?
 A. 3 B. 4 C. 5 D. 6
- _____ 14. Which of the following is not equivalent to 1 ?
 A. $a^0 b^0$ B. $(a^0 b^0)^2$ C. $a^0 b^2$ D. $(5a^2 b^3)^0$
- _____ 15. What is the single value of $(5 + 5^{-2})^0 (6^0 + 6)^{-2}$?
 A. $\frac{1}{15}$ B. $\frac{1}{25}$ C. $\frac{1}{40}$ D. $\frac{1}{49}$
- _____ 16. Which of the following will not have a negative exponent when change to exponential form ?
 A. a/a^2 B. b^4 / b^6 C. $10m^2 / 2m^3$ D. $25m^5 / 2m^3$
- _____ 17. What is the simplest form of $(a^{1/2})^{2/3}$?
 A. $a^{1/3}$ B. $a^{2/3}$ C. $a^{1/2}$ D. $a^{1/6}$
- _____ 18. Which of the following is equivalent to $m^{2/3}$?
 A. $(m^2 n^2)^3$ B. $(m^2 n^0)^3$ C. $(m^{1/3} n^0)^2$ D. $(m^0 n^{1/3})^2$
- _____ 19. Which of the following is not equivalent to 1 ?
 A. $(a^{2/3} b^{3/4})^0$ B. $(a^0 b^0)^{2/3}$ C. $(a^2)^{-1} (a^{1/2})$ D. $(a^2)^{1/2} (a^{-1})$
- _____ 20. What is $m^{1/4}$ in radical form ?
 A. $\sqrt[3]{m}$ B. $\sqrt[2]{m}$ C. $\sqrt[6]{m}$ D. $\sqrt[4]{m}$
- _____ 21. What is $\sqrt[3]{abc}$ in exponential form ?
 A. $a^3 b^3 c^3$ B. $(abc)^{1/3}$ C. $a^2 b^2 c^2$ D. $(abc)^{1/3}$
- _____ 22. Which of the following is equivalent to $(5)^{5/4} (5)^{7/3}$?
 A. $\sqrt{5}$ B. $5\sqrt{5}$ C. $25\sqrt{5}$ D. $30\sqrt{5}$
- _____ 23. What is $(2)^{1/5} (2)^{2/5}$ in radical form ?
 A. $2\sqrt{5}$ B. $25\sqrt{5}$ C. $25\sqrt[5]{5}$ D. $25\sqrt[5]{5}$
- _____ 24. Which of the following is equivalent $(4^{1/3})^2$?
 A. $2\sqrt[3]{2}$ B. $3\sqrt[3]{2}$ C. $4\sqrt[3]{2}$ D. $5\sqrt[3]{2}$
- _____ 25. What law is applied on the expression $(5^{5/3}) (5^{7/3}) = 5^4$?
 A. product rule B. quotient rule C. power to power D. sum rule
- _____ 26. Which of the following is equivalent to $(5^{5/3})^2$?
 A. $25\sqrt[8]{5}$ B. $75\sqrt[3]{2}$ C. $625\sqrt[8]{5}$ D. $625\sqrt[3]{2}$
- _____ 27. Which of the following is equivalent to $(\sqrt[3]{12})^3$?
 A. 4 B. 8 C. 12 D. 16
- _____ 28. What is the simplest form of $(\sqrt[5]{4})(\sqrt[5]{8})$?
 A. 2 B. 4 C. 6 D. 8
- _____ 29. What is $\frac{\sqrt{18}}{\sqrt{2}}$ in simplest form ?
 A. 1 B. 2 C. 3 D. 4
- _____ 30. Which of the following is $\sqrt[3]{\sqrt{64}}$ in simplest form ?
 A. 1 B. 2 C. 3 D. 4
- _____ 31. What is the product of $(\sqrt[3]{8})(\sqrt{4})$?
 A. 1 B. 2 C. 3 D. 4
- _____ 32. Which of the following radical terms is not similar to $\sqrt{5}$?
 A. $2\sqrt{5}$ B. $5\sqrt{5}$ C. $3\sqrt{2}$ D. $3\sqrt{5}$
- _____ 33. What is the sum of $2\sqrt{5} + 12\sqrt{5}$?
 A. $14\sqrt{5}$ B. $22\sqrt{5}$ C. $32\sqrt{5}$ D. $42\sqrt{5}$
- _____ 34. Which has a sum of $12\sqrt{5}$?
 A. $2\sqrt{5} + 2\sqrt{5}$ B. $2\sqrt{5} + 4\sqrt{5}$ C. $2\sqrt{5} + 8\sqrt{5}$ D. $2\sqrt{5} + 10\sqrt{5}$
- _____ 35. What is the difference of $12\sqrt{5} - 2\sqrt{5}$?
 A. 10 B. 20 C. $10\sqrt{5}$ D. $14\sqrt{5}$
- _____ 36. What is the product of $(\sqrt{3})(\sqrt{3})$?

- A. 1 B. 2 C. 3 D. 4
- _____ 37. Which of the following is a radical equation?
- A. $2\sqrt{x} + 2 = 10$ B. $x\sqrt{2} + 2 = 10$ C. $2\sqrt{2} + x = 10$ D. $2\sqrt{10} + x = 2$
- _____ 38. What is the value of x in $\sqrt{x} = 6$?
- A. 12 B. 18 C. 36 D. 42
- _____ 39. A man walks 8 meters to the east, then turn south and walk 6 meters. How far is he from his starting point?
- A. 5 meters B. 10 meters C. 15 meters D. 20 meters
- _____ 40. A ladder 12 ft. tall leans against the wall of a building. The ladder touches a point of the wall 8 ft. from the ground. How far is the foot of the ladder from the building?
- A. $6\sqrt{3}$ ft. B. $12\sqrt{3}$ ft. C. $18\sqrt{3}$ ft. D. $24\sqrt{3}$ ft.

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Mathematics 9 -2nd Periodical Test

ANSWER KEY

1. C
2. B
3. A
4. A
5. A
6. C
7. C
8. D
9. C
10. C
11. D
12. A
13. C
14. C
15. D
16. D
17. A
18. C
19. C
20. D
21. B
22. C
23. C
24. A

- 25. A
- 26. C
- 27. C
- 28. A
- 29. C
- 30. B
- 31. D
- 32. C
- 33. A
- 34. D
- 35. C
- 36. C
- 37. A
- 38. C
- 39. B
- 40. A