

Regional Unified Term Examination: General Mathematics

Mathematics · Answer Key · 15 Questions

1. How is the regular hourly rate determined for a worker with a PHP624,000 annual salary?

- A) Add salary to hours
- B) Divide salary by 52, then by 40**
- C) Multiply salary by overtime
- D) Subtract hours from salary

2. If Ana's sales increase from PHP280,000 to PHP336,000 at a 4% commission, by how much does her gross income increase?

- A) PHP1,120
- B) PHP1,680
- C) PHP2,240**
- D) PHP2,800

3. What is the correct order for processing the price of a rice cooker with markup, discount, and VAT?

- A) Cost -> markup -> discount -> VAT**
- B) Cost -> discount -> VAT -> markup
- C) VAT -> cost -> markup -> discount
- D) VAT -> discount -> markup -> cost

4. Which entry is unrelated to the calculation of a worker's payroll?

- A) Allowance amount
- B) Deduction amounts
- C) Favorite color**
- D) Overtime hours

5. What is the next term in the Fibonacci sequence: 1, 1, 2, 3, 5, 8, ...?

- A) 10
- B) 11
- C) 12
- D) 13**

6. What is the formula for the nth term of an arithmetic sequence?

- A) $a_n = a_1 + d/n$
- B) $a_n = a_1 + nd$
- C) $a_n = a_1 + (n-1)d$**
- D) $a_n = n(a_1 + d)$

7. What is the sum of the first four terms of the geometric sequence defined by $a_n = 4(2)^{(n-1)}$?

A) 56

B) 58

C) 60

D) 64

8. Which formula is used for the future value of an ordinary annuity?

A) $FV = P[(1+i)^n - 1]/i$

B) $PV = P[1 - (1+i)^{-n}]/i$

C) $FV = P(1+i)^n$

D) $PV = P(1+i)^n$

9. Which pair of measurements represents volume?

A) Bacterium: 2 μm ; desk: 1.2 m

B) Medicine: 5 mL; water tank: 3 m^3

C) Road: 8 km; grain: 2 mg

D) Desk: 1.2 m; road: 8 km

10. If 1 mile equals 1.609 km, how many meters are in 3 miles?

A) 4,827 m

B) 5,309.7 m

C) 5,280 m

D) 6,210 m

11. What is the total exterior surface area of a cylinder with radius 3m and height 5m (excluding internal faces)?

A) 141.30 m^2

B) 160.14 m^2

C) 188.40 m^2

D) 216.66 m^2

12. Which source is most reliable for distance estimation?

A) Verbal memory

B) City Planning Office map

C) Travel-blog sketch

D) Informal estimate

13. If 1 USD = 56.00 PHP, what is the equivalent of 250 USD?

A) PHP13,500

B) PHP14,000

C) PHP14,500

D) PHP15,000

14. A meeting is at 21:00 in Tokyo (UTC+9). What is the time in Manila (UTC+8)?

A) 18:00

B) 19:00

C) 20:00

D) 21:00

15. The sensor reads 46.4°F. Using $C = (F - 32) * 5/9$, what is the temperature in Celsius?

A) 6°C

B) 8°C

C) 10°C

D) 14°C