

# MATH Exam Paper

## Subjective Questions

1. What is the Pythagorean theorem and explain its application?

---

Answer:

---

2. Derive the quadratic formula from the general form of a quadratic equation.

---

Answer:

---

3. Explain the concept of limits in calculus.

---

Answer:

---

4. Solve the following system of equations using substitution method:  $2x + y = 10$  and  $3x - y = 5$ .

---

Answer:

---

5. What are eigenvalues and eigenvectors? Provide an example.

---

Answer:

---

6. Describe the difference between permutations and combinations.

---

Answer:

---

7. What is the fundamental theorem of algebra?

---

Answer:

---

8. Explain how the binomial theorem can be used to expand expressions.

---

Answer:

---

9. Find the derivative of the function  $f(x) = x^3 + 5x^2 - 2x + 7$ .

---

Answer:

---

10. Explain the concept of mathematical induction and prove the sum formula for the first  $n$  integers.

---

Answer:

---

11. Formula of circle?

---

Answer:

---

12. What is the formula of a triangle?

---

Answer:

---

13. this is a math question

---

Answer:

---

14. pagination

---

Answer:

---

**MCQ Questions**

15. What is  $2+2$ ?

a) 3

b) 4

c) 5

d) 6

---

16. What is  $3+5$ ?

a) 5

b) 6

c) 7

d) 8

---

17. What is  $5*5$ ?

a) 20

b) 25

c) 30

d) 35

---

18. What is  $10/2$ ?

a) 3

b) 4

c) 5

d) 6

---

19. What is  $6-3$ ?

a) 1

b) 2

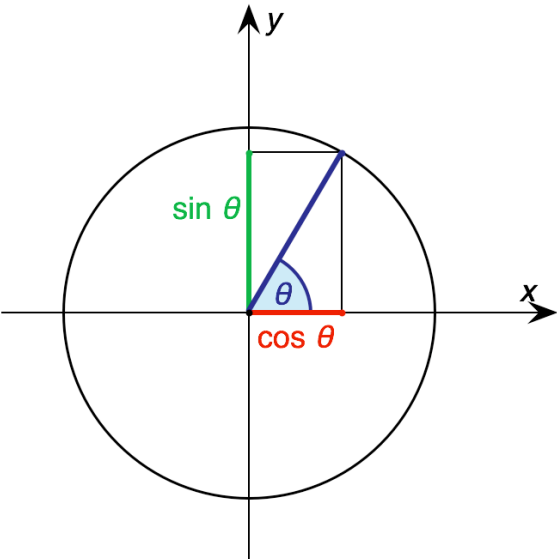
c) 3

d) 4

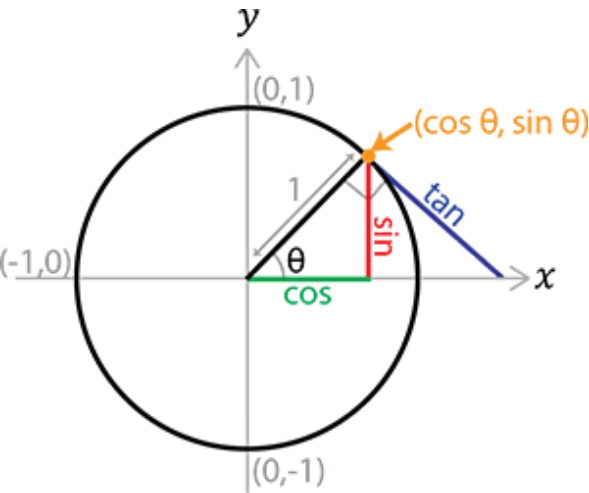
---

## Diagram Questions

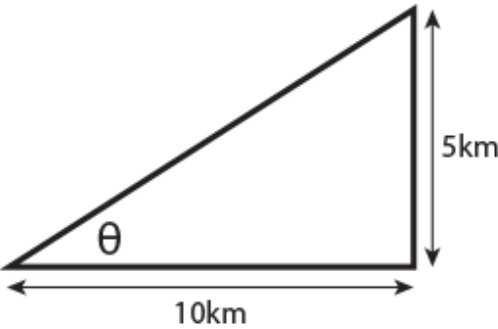
20. What is the structure of a cell?



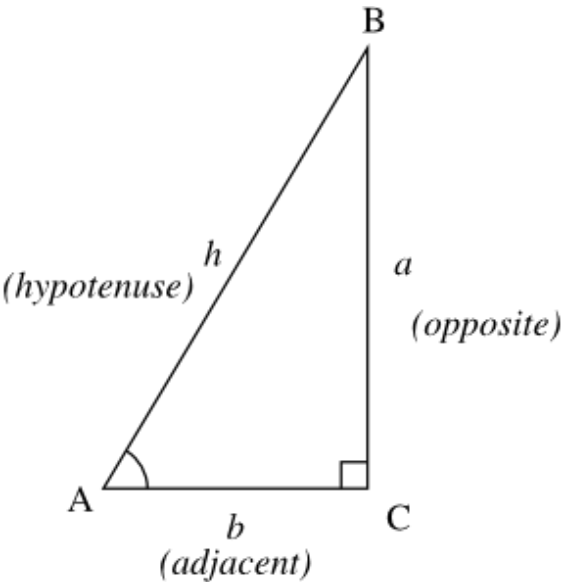
21. Draw the circuit diagram of a series circuit.



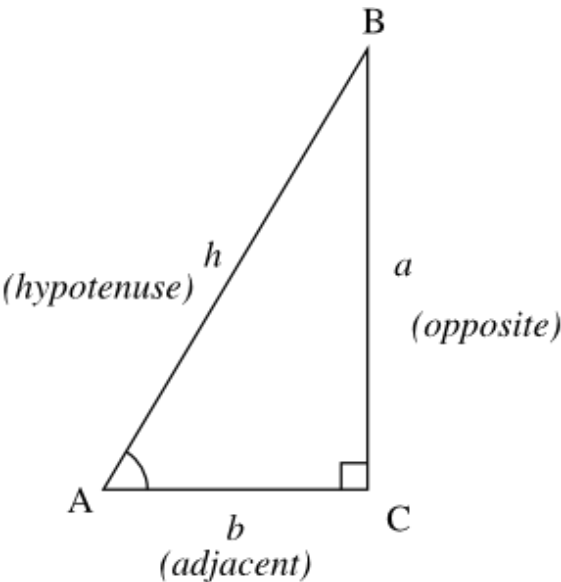
22. Illustrate the water cycle diagram.



23. question-diagram



24. diagram



25. jpeg

