

**SYNONYMS:-**

Word	Synonym / meaning	Meaning in Tamil
absurd (adj.)	<u>stupid</u> and unreasonable, <u>silly</u> in a humorous way	நகைப்புக்கிடமான முட்டாள்தனம்
infinity (n)	<u>unlimited</u> space, time, amount, a number large beyond any limit	முடிவிலி - எண்ணும் அளவுக்கு அப்பாற்பட்ட பெரிய எண்
intriguing (adj.)	very <u>interesting</u> because of being unusual or mysterious, <u>fascinating</u>	புதிரான, ஆர்வமூட்டக்கூடிய
prodigy (n)	a child who shows a great ability at a young age, <u>genius</u>	ஞானச்சிறுவன், மேதை
dingy (adj.)	a dark and <u>dirty</u> place	இருண்ட தூய்மையற்ற இடம்
physiology (n)	the scientific study of the way in which the bodies of animals and plants work	உடல் கூற்றியல் - உயிரினங்களின் செயல்பாடு குறித்த அறிவியல்
unkempt (adj.)	not neat or cared for	சுத்தமின்றி
uncouth (adj.)	behaving in an <u>unpleasant</u> way	தகாதமுறையில் நடந்துகொள்ளல்
conjecture (n)	an <u>opinion</u> or conclusion formed on the basis of incomplete information	கருத்து அல்லது முறையான தகவல்களின்றி முடிவுக்கு வருதல்
discrepancy (n)	an illogical or surprising lack of compatibility or similarity between two or more facts, <u>difference</u>	இருவேறு உண்மைகளுக்கிடையேயான ஒற்றுமை இல்லாதிருத்தல், வேறுபாடு
distinguished (adj.)	used to describe a person, <u>respected</u> and admired for excellence, <u>famous</u>	உயர்ந்த மனிதர்
devouring (adj.)	destructively <u>consuming</u>	அழிவுகரமாய் ஆட்கொள்ளுதல்
disembark (v)	to <u>leave</u> a ship, aircraft, etc. after a journey	கப்பல் அல்லது விமானத்திலிருந்து இறங்குதல்
emaciated (adj.)	very <u>thin</u> and weak, usually because of illness or extreme hunger	நோய் அல்லது பசியினால் உடல் மெலிந்து போதல்
agonising (adj.)	causing extreme physical or mental <u>pain</u> , <u>worry</u>	சித்திரவதைக்கு உட்பட்டு உடல் மற்றும் மனரீதியான வலி உண்டாக்குதல்

ANTONYMS:-

Word	Antonym
claimed	உரிமைகோருதல் X denied மறுத்தல்
childhood	குழந்தை பருவம் X adult பெரியவர்கள்
absurd	அபத்தமான X realistic யதார்த்தமான
progress	முன்னேற்றம் X retreat பின்வாங்குதல்
intriguing	புதிரான X boring மந்தமான
replied	பதிலளித்தல் X asked கேட்டல்
dingy	தூய்மையற்ற X clean சுத்தமான

silly	புத்தி கெட்ட	X	clever	திறமையுள்ள
discrepancies	முரண்பாடு	X	likeness	ஒத்த தன்மை
devouring	அழிவு	X	construct	ஆக்கம்
disembarked	இறங்கு	X	embark	ஏறு
question	கேள்வி	X	answer	பதில்
laugh	சிரி	X	cry	அழு
unkempt	ஒழுங்கற்ற	X	kempt	நேர்த்தியான
uncouth	அருவருப்பான	X	couth	பண்பட்ட
distributed	விநியோகித்தல்	X	gathered	சேர்த்தல்

Questions within the lesson (TB: 82 & 83):

1. What was the reaction of the classmates to Ramanujan's question?

There was a roar of laughter in the class.

2. What did the Indian mathematician Bhaskara prove?

Bhaskara proved Zero divided by Zero gives infinity.

3. Where did Ramanujan get "Loney's Trigonometry" book from?

Ramanujan got "Loney's Trigonometry" book from his college library.

4. Where did Ramanujan do his mathematical problems?

Ramanujan used to do problems on loose sheets of paper or on a slate.

5. What were the subjects neglected by Ramanujan in college?

Ramanujan neglected History, English and Physiology.

6. Which University granted him a fellowship of ₹75 a month?

The University of Madras granted him a fellowship of ₹75 a month.

7. What did Ramanujan send to G.H. Hardy?

Ramanujan sent a letter in which he set out 120 theorems and formulae. It included the Reimann series, a topic in the definite integral of calculus.

8. Who discovered a rare mathematical genius in Ramanujan?

Hardy and his colleague J.E. Littlewood discovered a rare mathematical genius in Ramanujan.

A. Answer the following questions in a sentence or two. (TB-85)

1. Why did the students laugh at Ramanujan?

Ramanujan asked, "If no banana is distributed among no one, will everyone still get one banana?" So the students laughed at him.

2. Why did the teacher compliment Ramanujan?

Ramanujan had asked a question that had taken mathematicians several centuries to answer. So the teacher complimented him.

3. What did Ramanujan do after reading the book on Trigonometry?

After reading the book on Trigonometry, Ramanujan began his own research and came forth with theorems and formulae that was not given in that book.

4. What disappointed Ramanujan's father?

Ramanujan neglected other subjects such as History, English, and Physiology. So he failed twice in his first-year arts examination in college. This disappointed his father.

5. How did Ramanujan manage his paper crisis?

Ramanujan managed his paper crisis by using even scraps of paper which he found lying on the streets. Sometimes he used a red pen to write over what was written in blue ink.

6. Why were Ramanujan's application for jobs rejected?

Ramanujan's application for jobs were rejected as no one could understand what was written in his frayed notebooks.

7. Why was Ramanujan sent back to India?

Ramunujan was suffering from the then incurable disease Tuberculosis. So he was sent back to India.

B. Answer the following questions in about 80 – 100 words. (TB-85)**1. Describe the life of Srinivasa Ramanujan in India.**

Ramanujan was born in Erode in Tamil Nadu on December 22, 1887. He was a mathematical prodigy. Even, his senior students visited his house to get their difficulties in mathematics solved. At the age of 13, he mastered Loney's Trigonometry. He worked out his problems on loose sheets of paper or on a slate and jot the results down in his notebooks. One of his senior friends showed him Synopsis of Elementary Results in Pure Applied Mathematics book by George Shoobridge Carr. He began to work on the problems given in it. This book triggered the mathematical genius in him.

Later, he got a clerical job in the Madras Port Trust. For his research, University of Madras granted him fellowship of Rs.25 a month. Ramanujan had sent his 120 theorems and formulae to the great mathematician G. H. Hardy, of Cambridge University. They had discovered a rare mathematical genius in Ramanujan. They invited him to London. With their help, Ramanujan started his research at Cambridge University. But unfortunately he was suffering from the disease Tuberculosis. So he was sent back to India and died at the age of 32.

2. Narrate the association of Ramanujan with G.H. Hardy.

Ramanujan had written a letter to G.H. Hardy of Cambridge University with 120 theorems and formulae. Hardy and J.E. Littlewood discovered a rare mathematical genius in Ramanujan. They helped Ramanujan's passage and made arrangements to stay at Cambridge University. In the company of Hardy and Littlewood, Ramanujan could forget much of hardship he had to endure. His achievements at Cambridge include the Hardy-Ramanujan-Littlewood circle method in Number Theory.

Paragraph for slow learners

- Ramanujan was born in Erode on December 22, 1887.
- He was a mathematical prodigy.
- He worked out his problems on loose sheets of paper or on a slate.
- University of Madras granted him fellowship of Rs. 25 a month.
- His achievements at Cambridge include the Hardy-Ramanujan-Littlewood circle method.
- Hardy and J.E. Littlewood discovered a rare mathematical genius in him.
- Ramunujan was suffering from Tuberculosis. He was sent back to India.

C. Match the words with correct Synonym and Antonym from the table. (TB-85)**Question**

S.No	Word	Synonym	Antonym
1	distribute	boundless	trivial
2	infinite	commence	sorrow
3	significant	joy	collect
4	delight	guess	clean
5	unkempt	circulate	conclude
6	initiate	messy	fact
7	conjecture	important	measurable

Answer

S.No	Word	Synonym	Antonym
1	distribute	circulate	collect
2	infinite	boundless	measurable
3	significant	important	trivial
4	delight	joy	sorrow
5	unkempt	messy	clean
6	initiate	commence	conclude
7	conjecture	guess	fact

Grammar**Connectors**

H. Complete the following sentences using appropriate Connectors from the box.

1. She felt cold although she was wearing a winter coat.
2. This restaurant has some of the best chefs in the town. Moreover their service is excellent.
3. I'm not going to the party tonight because I didn't get an invitation.
4. You can set the table. Meanwhile, I'll start making dinner.
5. I can play quite a few instruments. For instance, the flute, the guitar and the piano.
6. The store was out of chocolate chips; thus they would need to make a different type of cookies.
7. The stores are open daily except Sundays.
8. I'll stay as long as you need me.
9. This detergent is highly concentrated and therefore you will need to dilute it.
10. It was the thing he prized above all.

Active Voice and Passive Voice

I. Convert the following active sentences into passive sentences by supplying an appropriate passive verb form.

1. She will not recognize us. / We _____ by her.
a) will not recognize b) will not being recognized c) **will not be recognized**
2. They didn't invite me, but I went anyway. / I _____ but I went anyway.
a) **wasn't invited** b) wasn't being invited c) wasn't inviting
3. They broke up the table for firewood. / The table _____ up for firewood.
a) broke b) had broken c) **was broken**
4. She has won the first prize. / The first prize _____ by her.
a) has won b) **has been won** c) had been won
5. A friend of mine is repairing the car. / The car _____ by a friend of mine.
a) is repairing b) is repaired c) **is being repaired**
6. Begin the work tomorrow. / Let the work _____ tomorrow.
a) **be begun** b) begin c) is beginning
7. They speak English in New Zealand. / English _____ in New Zealand.
a) is speaking b) **is spoken** c) is being spoken
8. His attitude shocked me. / I _____ by his attitude.
a) had shocked b) had been shocked c) **was shocked**
9. She had already sent the parcel. / The parcel _____ by her.
a) has already been sent b) **had already been sent** c) was already sent
10. Her silence worries me. / I _____ her silence.
a) am worrying by b) **am worried by** c) have worried by

J. Match the following Active voice sentences with Passive voice

Active Voice	Passive Voice
1. I will never forget this experience	A novel has been written by her.
2. Mother made a cake yesterday.	The deer was being chased by the tiger.
3. Have you finished the report?	A cake was made by mother yesterday.
4. The tiger was chasing the deer.	Has the report been finished by you?
5. She has written a novel.	This experience will never be forgotten by me.

Answer

Active Voice	Passive Voice
1. I will never forget this experience	This experience will never be forgotten by me.
2. Mother made a cake yesterday.	A cake was made by mother yesterday.
3. Have you finished the report?	Has the report been finished by you?
4. The tiger was chasing the deer.	The deer was being chased by the tiger.
5. She has written a novel.	A novel has been written by her.

K. Change the following into passive voice.

1. Stanley will inform you later.	Ans: You will be informed by Stanley later.
2. People speak Portuguese in Brazil.	Ans: Portuguese is spoken by people in Brazil.
3. My grandfather built this house in 1943.	Ans: This house was built by my grandfather in 1943.
4. Do not hurt the animals.	Ans: Let not the animals be hurt.
5. You must not drop litter in the streets.	Ans: Litter must not be dropped in the streets by you.
6. Carry it home.	Ans: Let it be carried home.
7.They are decorating the wall.	Ans: The wall is being decorated by them.
8. He has already mended the TV set.	Ans: The TV set has already been mended by him.