असतो मा सद्गमय, तमसो मा ज्योतिर्गमय।।

HALLMARK PUBLIC SCHOOL
www.hallmarkpublicschool.com

SUMMER VACATION ASSIGNMENT 2024

CLASS-IX

MAY 21, 2024 TO JULY 03, 2024

The School Reopens on JULY 04, 2024.

Dearest Hallmarkites

Greetings from Hallmark!

Summer Vacation brings with itself a much-needed breather from hectic schedule. It is the most awaited time meant for relaxation and enjoyment, and if this time is utilised for creative pursuits, it becomes a learning experience.

Keeping this in view, we have designed a few **exciting fun projects/ assignments** to enhance learning skills, help understand concepts better, and make for a **great crash course** aimed at **improving your academic output** as well. These assignments will not only help you **to revise and reinforce what you have learned in school**, but will also enrich your knowledge.

In a nutshell, the Summer Vacation Assignment has been designed to be a **meaningful and creative exercise.**

Important Note:

- These projects/ assignments will be assessed as **Subject Enrichment Activity** to be **added in your Portfolio.**
- **Submit the Summer Vacation Assignment** to the Class Teacher **within a week of reopening of the school.**

JUST A LITTLE NOTE

- **Make sure you have a quiet, well-lit place to do homework.**

  Avoid doing homework with the television on or in places with other distractions, such as mobile phones, people coming and going.

- **Make sure the materials you need, such as paper, pens/pencils and a dictionary, are available.**

  In case any special material is required for some projects and get that in advance.

- **Learn time management.**

  Establish a set time each day for doing homework. It will help regulating your Body Clock as per the set schedule.

- **Ask for assistance and guidance, not answers**.

  Don't insist your parents/elders to provide you with the solutions of your assignments. Seek guidance but don't expect answers.

- **If homework is meant to be done by you alone, don't involve any elder.**

  Homework is a great way to develop independent, lifelong learning skills.

- **Figure out what is hard homework and what is easy homework.**

  Do the hard work first. The harder a task is, the more energy and focus we need to complete it. Starting the harder tasks when you are tired is more difficult and often results in putting them off for another day.

- **Celebrate progress in homework.**

  Celebrate every successful homework completion and rejoice that success with a special event (e.g., pizza, a walk, a trip to the park) to reinforce the positive effort.

Best wishes for Happy Holidays!

Hallmark Team

ENGLISH

- **LET'S ENHANCE COMMUNICATION SKILLS:**

  'A lot of problems in the world would be solved if we are able to express ourselves verbally well.' Let's enhance our communication skills with the help of '**Words and Expressions' (Workbook).**

  Go through the Units 3 & 4 and solve their exercises as well.

- **STUDENT PORTFOLIO ENRICHMENT ACTIVITIES:**
- **Epilogue Writing-** 'The Adventures of Toto'
- **Case-Based Research-** 'The Sound of Music'
- **Dear Diary**

  'Memory is the diary that we all carry with us.'

  But writing the memories in a diary is always a great experience. Let's keep a diary this vacation recording the best bits of the holidays. Write:

  - about the special memories made with friends and family
  - the things you learnt and which you want to share with your class when you come back
  - about interesting places visited during your holiday

  Create it adding snapshots.

हिंदी

STUDENT PORTFOLIO ENRICHMENT ACTIVITIES:

- **स्पर्श भाग 1**
  - पाठ–'एवरेस्ट मेरी शिखर यात्रा' पढें और **Mind Map** बनाएँ।
- **संचयन भाग 1**
  - पाठ–'स्मृति' पढें और **Mind Map** बनाएँ।

WORK TO BE DONE IN THE HINDI NOTEBOOK:

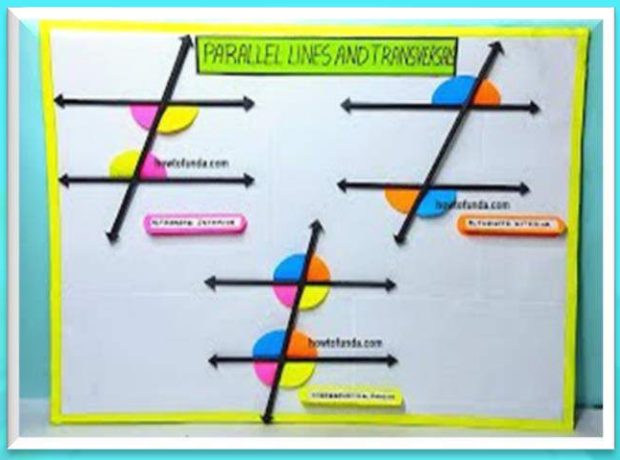
- **Together With हिंदी व्याकरण (कोर्स–बी)–9**
  - पृष्ठ संख्या 39–40, 47–48, 51

MATHEMATICS

Exemplar Problems: Solve all the exercises of Chapters 1, 2 and 3 in your mathematics notebook.

STUDENT PORTFOLIO ENRICHMENT ACTIVITIES:

1. Make a working model on Transversal of Parallel Lines.



- https://youtu.be/2ugoL_iZhjA?si=-7L91IDMj2ehqzUr
- https://youtu.be/nzEdDTstn70?si=sI5Ado33EM9V61zR

Note**: **The above links are for the reference only. Use your own creativity.

2. GAME OF COORDINATE PLANE

Direction: Plot the points on the graph (origin should be at the centre of your graph). Connect the points with line segments as you plot them. Keep connecting the points until you see LINE ENDS. Then start the next group. Shade in when finished.

1. (-5 , -3)
(-4 , -5)
(-3 , -7)
(-3 , -6)
(-2 , -4)
(-1 , 0)
LINE ENDS

2. (-7 , 1)
(-8 , 4)
(-9 , 7)
(-8 , 10)
(-7 , 10)
(-5 , 9)
(-3 , 7)
(-2 , 6)
(0 , 7)
(2 , 6)
(3 , 7)
(5 , 9)
(7 , 10)
(8 , 10)
(9 , 7)
(8 , 4)
(7 , 1)
(3 , 4)
(0 , 1)
(-3 , 4)
(-7 , 1)
LINE ENDS

3. (-5 , 0)
(-4 , 0)
(-2 , -1)
(-4 , -1)
(-5 , 0)
LINE ENDS

4. (5 , -3)
(4 , -5)
(3 , -7)
LINE ENDS

5. (7 , 1)
(8 , -3)
(9 , -7)
(8 , -7)
(7 , -6)
(4 , -9)
(1 , -10)
(-1 , -10)
(-4 , -9)
(-7 , -6)
(-8 , -7)
(-9 , -6)
(-8 , -2)
(-7 , 1)
LINE ENDS

6. (5 , 0)
(4 , -1)
(2 , -1)
(4 , 0)
(5 , 0)
LINE ENDS

7. (1 , 0)
(2 , -4)
(3 , -6)
(3 , -7)
(1 , -8)
LINE ENDS

8. (-4 , -1)
(-4 , 0)
(-3 , -1)
SHADE IN
LINE ENDS

9. (-3 , -7)
(-1 , -8)
(1 , -8)
(2 , -6)
(1 , -5)
(-1 , -5)
(-2 , -6)
(-1 , -8)
SHADE IN
LINE ENDS

10. (4 , 6)
(7 , 9)
(7 , 5)
(6 , 4)
(4 , 5)
(4 , 6)
SHADE IN
LINE ENDS

11. (4 , -1)
(4 , 0)
(3 , -1)
SHADE IN
LINE ENDS

12. (-7 , 4)
(-7 , 9)
(-4 , 6)
(-4 , 5)
(-6 , 3)
(-7 , 4)
SHADE IN
LINE ENDS

SCIENCE

1. Ch-1 Matter in Our Surroundings
2. Ch-2 Is Matter Around Us Pure
3. Ch-5 The Fundamental Unit of Life
4. Ch-8 Motion
5. Ch-9 Force and Laws of Motion

General Instructions:

1. Revise the above mentioned chapters and solve the following Revision Worksheet in your Science Notebook.
2. Section A has one mark questions comprising MCQ, Case Study-based and assertion-reason type questions. They are to be answered in one word or in one sentence.
3. Section B has short answer type questions. These are to be answered in about 50 - 60 words each.
4. Section C has long answer type questions.

SECTION-A

Q.1 What is the name of the metal which exists in liquid state at room temperature?

(A) Sodium (B) Potassium (C) Mercury (D) Bromine

Q.2 If we put camphor in an open container, its amount keeps on decreasing due to the phenomenon of:

(A) Evaporation (B) Precipitation (C) Condensation (D) Sublimation

Q.3 In tincture of iodine, find the solute and solvent:

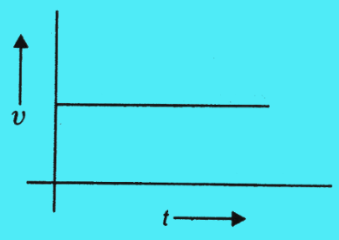
(A) Alcohol is the solute and iodine is the solvent.

(B) Iodine is the solute and alcohol is the solvent.

(C) Any component can be considered as solute or solvent.

(D) Tincture of iodine is not a solution.

Q.4 From the given v-t graph, it can be inferred that the object is:



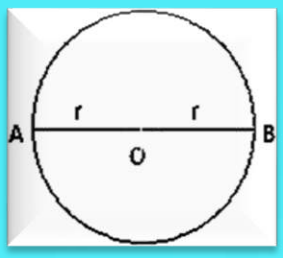
(A) At rest

(B) In uniform motion

(C) Moving with uniform acceleration

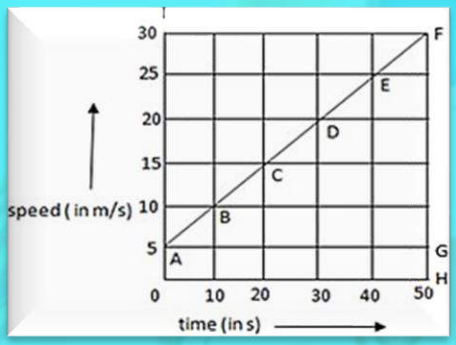
(D) In non-uniform motion

Q.5 A particle is moving in a circular path of radius r. The displacement after half a circle would be:



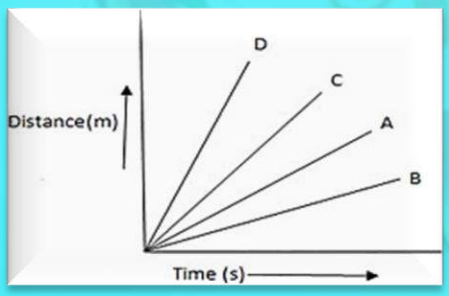
(A) Zero (B) πr (C) $2r$ (D) $2\pi r$

Q.6 The speed - time graph of a car is given here. Using the data in the graph calculate the total distance covered by the car.



(A) 1250 m (B) 875 m (C) 1500 m (D) 870 m

Q.7 Four cars A, B, C and D are moving on a levelled, straight road. Their distance time graphs are shown in the figure below. Which of the following is the correct statement regarding the motion of these cars?



(A) Car A is faster than car D.
(B) Car B is the slowest.
(C) Car Cis faster than car D.
(D) Car C is the slowest.

Q.8 In a water-sugar solution:

(A) Water is solute and sugar is solvent.

(B) Water is solvent and sugar is solute.

(C) Water is solute and water is also solvent.

(D) None of these

Q.9 Cell is the structural and functional unit of life. The word cell is derived from the Latinword 'cellula' which means "a little room". Name the scientist who coined the term cell.

(A) Robert Hooke
(B) Anton Von Leeuwenhoek
(C) Robert Brown
(D) Ernst Haeckel

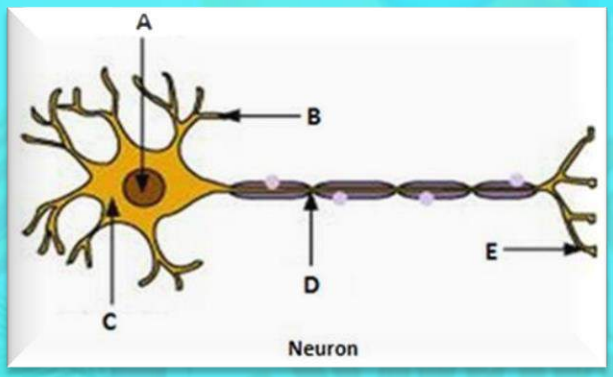
Q.10 The inertia of a moving object depends on:

(i) Mass of the object
(ii) Momentum of the object
(iii) Speed of the object
(iv) Shape of the object

Choose the correct option:

(A) (i) and (ii) (B) only (i) (C) only (ii) (D) (iii) and (iv)

Q.11 Given below is a diagram showing the structure of a neuron tissue.



Choose the correct labelling for the parts A, B, C, D and E.

(A) A – Nucleus; B – Cell body; C – Dendrite; D – Axon; E – Nerve ending.
(B) A – Nucleus; B – Dendrite; C – Cell body; D – Nerve ending; E – Axon.
(C) A – Nucleus; B – Axon; C – Cell body; D – Dendrite; E –Nerve ending.
(D) A – Nucleus; B – Dendrite; C – Cell body; D – Axon; E – Nerve ending.

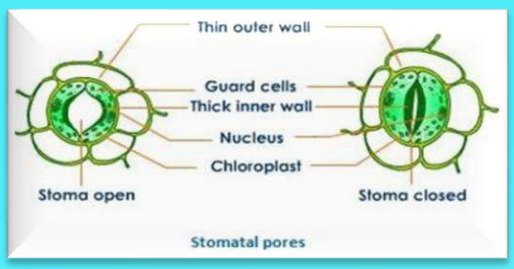
Q.12 A bullet of mass 0.020 kg is fired; it strikes the wooden block of 0.50kg and sticks in it. The bullet and wooden block move off together with a velocity of 100 m/ s. What is the momentum of the bullet with wooden block?

(A) 2 kg m/ s (B) 50 kg m/ s (C) 52 kg m/ s (D) 70 kg m/ s

Q.13 Which of the following statements is not related to the endoplasmic reticulum?

(A) It behaves as transport channel for proteins between nucleus and cytoplasm.
(B) It transports materials between various regions in cytoplasm.
(C) It can be the site of energy generation.
(D) It can be the site of some biochemical activities of the cell.

Q.14 Tiny pores are found on the surface of the leaves of plants. These pores are called stomata. These stomata surrounded by the kidney shaped guard cells provide many vital functions to the plants.



Which of the following functions is not served by the stomata for the plants?

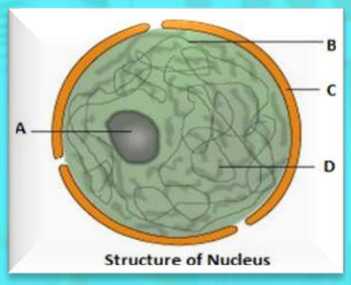
(A) Exchange of gases, particularly CO_2 and O_2, with atmosphere

(B) Loss of water in the form of vapours during transpiration

(C) Helps to create pressure for the water to rise upward, by its process of transpiration.

(D) Helps the leaves to carry out the process of photosynthesis

Q.15 The nucleus controls all the activities of the cell and acts as a site of DNA material and protein synthesis. It is composed of some components which all together give the nucleus its functionality. Here is shown a figure of nucleus with some of its components labeled as A, B, C and D. Name these components correctly?



(A) A – Nucleons; B – Chromatin; C – Nuclear membrane; D – Nucleoplasm

(B) A – Nucleus; B – Chromatin; C – Nuclear membrane; D – Nucleoplasm

(C) A – Nucleolus; B – Chromatin; C – Nuclear membrane; D – Nucleoplasm

(D) A – Nucleolus; B – Chromatin; C – Nuclear membrane; D – Nuclear wall

Q.16 You must have observed that a fruit when unripe is green but it becomes beautifully coloured when ripe. According to you what is the reason behind this colour change?

(A) Chloroplasts change to chromoplasts.

(B) Chromoplasts change to chromosomes.

(C) Chloroplasts change to chromosomes.

(D) Chromoplasts change to chloroplasts.

Q.17 Rahul's mother was going to make pickle. For this she cut the vegetables into small pieces and put them in the Sun for few hours. Rahul was observing all her activities very curiously and asked his mother if why she had put the salted vegetables in the Sun. Among the following what might be the most appropriate answer for his question?

(A) So that the pickle may get extra flavour.

(B) So that the cut vegetables may absorb the vitamin D as a nutrient from the Sun rays.

(C) So that the vegetables may lose all the water by diffusion and evaporation and become dry.

(D) So that the salt may get evenly and properly absorbed by the vegetables.

Q.18 The table lists a few properties of substances:

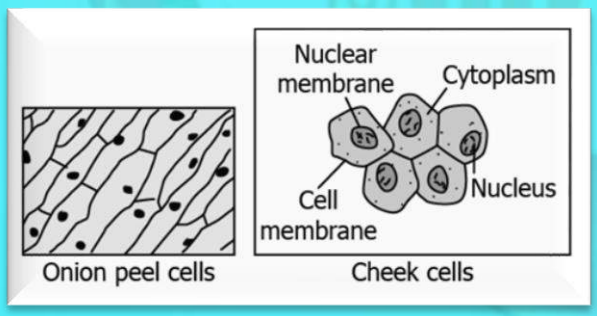
1. Density
2. Colour
3. Lustre

To apply the process of centrifugation in a mixture, which property of the substances should vary?

(A) only colour (B) only density

(C) both luster and colour (D) both colour and density

Q.19 The image shows cells in the onion peel and human cheek.



What can be understood by observing these cells?

(A) All living things made of cells that look similar.

(B) All living things made up of cells that are structurally similar but functionally different.

(C) All living things are made up of cells that are functionally similar but structurally different.

(D) All living things are made of cells that look different from each other.

Question No. 20 to 21 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

(A) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(B) Both the Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(C) Assertion is true, but the Reason is false.

(D) The statement of the Assertion is false, but the Reason is true.

Q.20 **Assertion:** Specialization of cells is useful for organism.

Reason: It increases the operational efficiency of an organism.

Q.21 **Assertion:** Displacement of an object may .be zero even if the distance covered is not zero.

Reason: Displacement is the shortest distance between the initial and final position.

Q.22 A student ties a stone to a thread of length 1 m and starts swinging it in a circular motion. The stone completes 20 rotations in 10 seconds. What is the speed of the moving stone?

(A) π m/ sec (B) 2π m/ sec (C) 4π m/ sec (D) 8π m/ sec

Q.23 In a rocket, a large volume of gases produced by the combustion of fuel is allowed to escape through its tail nozzle in the downward direction with the tremendous speed and makes the rocket to move upward.

Which principle is followed in this take off of the rocket?

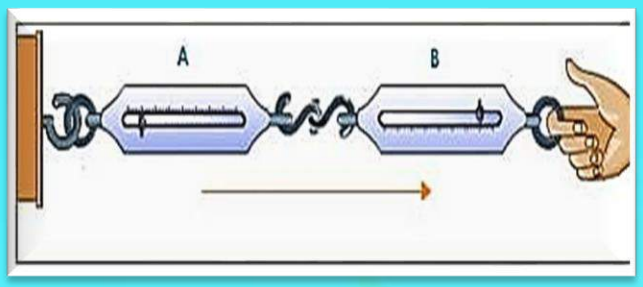
(A) Moment of inertia

(B) Conservation of momentum

(C) Newton's first law of motion

(D) Newton's law of gravitation

Q.24 Newton's third law of motion explains the two forces namely 'action' and 'reaction' coming into action when the two bodies are in contact with each other. These two forces:



(A) Always act on the same body.

(B) Always act on the different bodies in opposite directions.

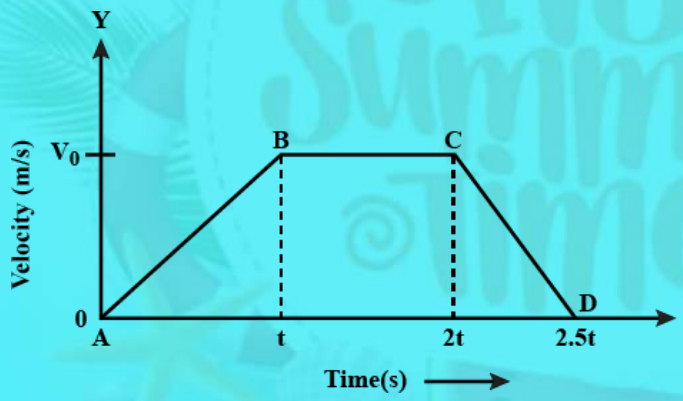
(C) Have same magnitude and direction.

(D) Acts on either body at normal to each other.

SECTION-C

CASE-1

Figure below shows a velocity-time graph for a car starting from rest. The graph has three parts AB, BC and CD.



Q.25 Which part of graph shows motion with uniform velocity?

(A) BC (B) CD (C) AB (D) BD

Q.26 Which part of graph shows motion with uniform acceleration?

(A) AB (B) BC (C) CD (D) DC

Q.27 Which part of graph shows motion with uniform retardation?

(A) CD (B) CB (C) BA (D) BC

Q.28 The slope of velocity-time graph for particle moving with uniform velocity is equal to

(A) final velocity. (B) initial velocity. (C) zero. (D) none the above.

CASE-2

There are many changes which take place in our surroundings. Some of them are physical changes in which no new substance is formed. These changes are reversible. Chemical changes lead to formation of new substance with new properties. It cannot be easily reversed. Physical changes involve less energy whereas chemical changes involve more energy. Formation of mixture mostly involves physical change whereas compound is formed by chemical change.

Q.29 Which of the following is not a physical change?

(A) Melting of wax
(B) Heating of iron
(C) Digestion of food
(D) Evaporation of water

Q.30 Formation of water from hydrogen and oxygen in presence of electric spark is _____.

(A) physical change
(B) chemical change
(C) both (A)&(B)
(D) mixture is formed

Q.31 Oxygen can be separated from liquid air by_____.

(A) distillation
(B) fractional distillation
(C) steam distillation
(D) vacuum distillation

Q.32 When iron fillings are heated with sulphur powder

(A) mixture formed
(C) physical change
(B) black compound formed
(D) none of these

SECTION-B

Q.33 (a) What role vacuole play in a typical plant cell?

(b) What will happen if Golgi Apparatus is removed from the cell?

Q.34 (a) A sample of water under study was found to boil at 102°Cat normal temperature. Is the water pure? Will this water freeze at 0°C? Explain.

(b) A driver is able to cut through water in a swimming pool. Which property of matter does the observation show?

Q.35 Draw velocity-time graphs for the following situations:

(a) When body is moving with a uniform velocity.

(b) When body is moving with a variable velocity but uniform retardation.

Q.36 A bus starting from rest moves with a uniform acceleration of 0.1 m/sec^2 for 2 minutes. Find the speed acquired and the distance travelled.

SECTION-C

Q.37 Derive graphically first and second equation of motion.

Q.38 (a) Draw a diagram of the epidermis of the leaf showing surface view and label stomata with guard cell and epidermal cell.

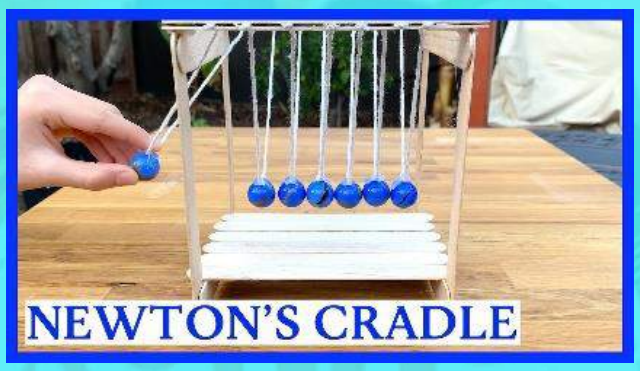
(b) Answer the following:

(i) How is the epidermis of the plant living in very dry habitats adapted?

(ii) Write the functions of guard cells of stomata in the leaf.

STUDENT PORTFOLIO ENRICHMENT ACTIVITIES:

1. Prepare a brief write up on' Hydroponics'. Use A4 size pastel sheets.
2. Newton's Cradle Working Model



https://youtu.be/vE8UeU7RNKk?si=DCLtk1iC_stlvSMf

SOCIAL SCIENCE

Case Study on **Condition of Women in France in 1789**

- Use A4 sized pastel sheets for the Case Study.
- Add aesthetics to make it attractive.

PROJECTS FOR CBSE EXPRESSION SERIES-2024

- Write an **Essay** (700 words) or make a **PAINTING** (A4 size sheet) or a **POEM** on **ANY ONE** of the given topics:

  A nation can develop only if all are educated

  OR

  To save environment, my suggestions are

Revise all the Syllabus done till date!

Happy Holidays!