SAINIK SCHOOL

Class 9

LIVE EXAMCART

क्या एक किताब से पढ़कर
Admission लिया जा सकता है ?

जानिये इस वीडियो में
कहाँ से **सबसे ज्यादा प्रश्न मिले**

SCIENCE	-	23/25
REASONING	-	22/25
MATH	-	[redacted]
GK	-	[redacted]
ENGLISH	-	[redacted]

Sainik School Class 9th

Subject –G.S.

Subject	No of Ques asked from our book	Total Ques	Ques No.
G.S.	23	25	101,102,103,104,105,106,107,108,110,111,112, 113,115,116,117,118,119,120,121,122,123,124, 125

Question # 101

Which of the following statements are not true for metals?

A. Metals are good conductor of heat and electricity.

B. The property of metals by which they can be beaten into thin sheets is called ductility.

C. Metals produce ringing sounds so they are said to be Sonorous.

D. In general metallic oxides are acidic in nature.

Book Page No. # 55

- Metals are solids at room temperature, except mercury, which is liquid at room temperature.

- They are good conductors of heat and electricity. Copper is the best conductor of electricity followed by

- The property by virtue of which metal can be beaten into sheets is called **malleability.** For example, we use aluminium foil to pack food.
- The property by which metals can be drawn into wires is called **ductility.** Metals like copper, silver and aluminium can be drawn into wires.

- Metals are **sonorous**. They produce sound when struck.

Question # 102

Polythene and PVC are examples of :

(1) Thermoplastics

(2) Thermosetting plastics

(3) Melamine

(4) Bakelite

Book Page No. # 64

Thermoplastic		
1.	Polyvinyl Chloride (PVC)	Bottles, raincoat, pipes, handbags, shoes, electric cable insulation, furniture, ropes, toys, etc.
2.	Polystyrene (PS)	Thermo-insulating parts of electric appliances like refrigerators, gears of machines, toys, protective coverings like covers of CD and DVD, etc.
3.	Polyethylene (PE)	Milk bags, packing bags, flexible garden pipes, etc.
4.	Polypropylene (PP)	Parts of loudspeakers and vehicles, ropes, mattresses, laboratory appliances, etc.

Question # 103

The bulb of the dropper, immersed in water is pressed. When the pressure is released, water gets filled in the dropper. This happens due to

(1) Force of water

(2) Force of gravity

(3) Pressure of water

(4) Atmospheric pressure

Book Page No. # 36

Atmospheric Pressure : The pressure exerted by the column of air per unit area of the earth's surface is known as Atmospheric Pressure. It can be measured using a device called a barometer : Evangelista Torricelli was the inventor of the **barometer**. A **barometer** is a device which is used for the measurement of air pressure.

Question # 104

An oscillating body is making 360 oscillations in 3 minutes. Its frequency in hertz will be

(1) 120

(2) 2

(3) 20

(4) 12

Book Page No.

Oscillatory : coming back to the same position after a fixed time interval, like a pendulum. The time taken by the pendulum to complete one oscillation is called its time period.

Question # 105

A person who is standing 2 m in front of a plane mirror, seems to be _____ m away from his image.

(1) 2 m

(2) 4 m

(3) 0.5 m

(4) 1 m

Book Page No. # 55

55. An object is placed 1.5 m from a plane mirror. How far is the image from the object?

(A) 3 m (B) 1.5 m

(C) 2 m (D) 1 m

55. (A)

Question # 106

Increase in height during puberty depends on :

(1) Genes inherited from mother only

(2) Eating right kind of food and exercise

(3) Exercise and genes inherited from parents

(4) Eating right kind of food and genes inherited from parents

Book Page No. # 114

Increase in Height

- The most conspicuous change during puberty is the sudden increase in height. The bones of the arms and the legs elongate and make a person tall.
- At about 18 years of age, a girl and a boy reach their maximum height.
- Height of an individual is more or less similar to that of some family member. This is because height depends on the genes inherited from parents.

Question # 107

Consider the following statements :

A. Endocrine glands release hormones into the blood stream to reach a target site.

B. Hormones are not chemical substances.

Select the correct answer using the code given below :

(1) Only A is correct

(2) Only B is correct

(3) A and B are correct

(4) Neither A nor B is correct

Book Page No. # 114, 115

4. Endocrine Glands and Hormones

The endocrine system is made up of glands that produce and secrete hormones, chemical substances produced in the body that regulate the activity of cells or organs. These hormones regulate the body's growth, metabolism (the physical and chemical processes of the body), and sexual development and function.

- Endocrine glands release hormones into the bloodstream to reach a particular body part called target site :

Glands	Location
Pituitary gland	At the base of brain
Pineal Gland	At the base of brain
Thyroid Gand	Neck
Thymus Gland	Chest
Pancreas (Islets of Langerhans	Abdomen
Adrenal Gland	Above the kidney
Gonads	Pelvic cavity

Question # 108

Which source book keeps a record of all endangered animals and plants?

(1) Blue Data Book

(2) Green Data Book

(3) Red Data Book

(4) White Data Book

Book Page No. # 109

Red Data Book

- The Red Data Book is the file for recording rare and endangered species of animals, plants and fungi.
- Red data book gives important data for observational studies and monitoring programmes on habits and habitats of rare and endangered species.

Question # 110

When fertilisation does not occur then the released egg and thickened lining of the uterus is shed off. It is called :

(1) Pregnancy

(2) Menarche

(3) Menopause

(4) Menstruation

Book Page No. # 117

- **Menstruation :** If fertilisation does not occur, the released egg, and the thickened lining of the uterus along with its blood vessels are shed off. This causes bleeding in women which is called **menstruation**. Menstruation occurs once in about 28 to 30 days.

Question # 111

111 Match List I with List II :

List I	List II
A. Coke	I. Obtained during the processing of coal to get coke.
B. Coal Tar	II. Almost pure form of carbon
C. Coal Gas	III. Petroleum
D. Petrol	IV. Naphthalene balls

Choose the correct option from the answers given below :

(1) A-I, B-II, C-III, D-IV

(2) A-II, B-IV, C-III, D-I

(3) A-II, B-IV, C-I, D-III

(4) A-III, B-II, C-IV, D-I

Book Page No. # 1

(i) **Coke :** It contains 98 % carbon. It is porous and the purest form of coal. It is a good fuel and burns without smoke. It is largely used as a reducing agent in the extraction of metals from their ores. It is also used in making fuel gases like water gas and producer gas.

(ii) **Coal Tar (Liquid) :** It is a mixture of different carbon compounds. Its fractional distillation gives many chemical substances (Benzene, Toluene, Phenol and Aniline) which are further used in the preparation of dyes, explosives, paints, synthetics fibers, drugs, photographic materials, roofing materials and pesticides.
Naphthalene balls (also obtained from coal tar) are used to repel moths and other insects.Initially coal tar was used in metalling the roads but these days bitumen, a petroleum product is used. **Bitumen** is a sticky, black, highly viscous liquid or semi-solid form of petroleum.

(iii) **Coal Gas :** Coal gas is mainly a mixture of hydrogen, methane and carbon monoxide. It is obtained during the processing of coal to get coke. It is an excellent fuel. It was earlier used for lighting houses, factories and streets in Mumbai until 1950. Now it is mainly used as a source of heat.

Question # 112

A combustible substance catches fire/burn as long as its temperature is _____, its ignition temperature.

(1) Higher than

(2) Lower than

(3) Equal to or higher than

(4) Equal to or lower than

Book Page No. # 3, 4

- It is important to note that different substances burn at different temperatures. For a substance to burn, some minimum temperature is required and this minimum temperature is known as **"Ignition Temperature"**. For example, the Ignition temperature of phosphorus is 35°C. So, unless phosphorus is heated to 35°C, it will not catch fire.

Question # 113

Which of the following is/are present only in plant cell?

A. Cell membrane

B. Cell wall

C. Chloroplast

D. Nuclear membrane

Select the correct answer using the code given below :

(1) B and C

(2) A and D

(3) B

(4) C

Book Page No. # 10

Part	Plant Cell	Animal Cell
Cell Membrane	Present	Present
Cell Wall	Present	Absent
Cell Shape	Square or rectangular in shape	Irregular or round in shape
Nucleus	Present	Present
Cytoplasm	Present	Present
Plastids	Present	Absent
Vacuole	Few large or a single, centrally positioned vacuole	Usually small and numerous.

Question # 115

115 When electric current is passed through the Copper Sulphate solution?

(1) Copper gets deposited on the electrode connected to the positive terminal of the battery.

(2) Copper gets deposited on the electrode connected to the negative terminal of the battery.

(3) No reaction takes place

(4) Copper gets deposited either on positive or on negative terminal of the battery.

Book Page No. # 69

For example: If current is passed through copper sulphate solution copper gets deposited on the plate connected to negative terminal of the battery because when we pass current through copper sulphate solution, the positive copper ions try to get electrons from teh negative terminal of the battery and will be deposited on the plate connected to the negative terminal of the battery.

Question # 116

116 Match the following :

Heavenly body	Characteristics
A. Orion	I. Small objects revolving around Sun between Mars & Jupiter.
B. Comet	II. Brightest star in the sky located close to Orion.
C. Sirius	III. A constellation can be seen during winter time in late evenings.
D. Asteroid	IV. An object which revolves around Sun in elliptical orbit and has a bright head and a tail.

Choose the correct option from the answers given below :

(1) A-III, B-IV, C-I, D-II
(2) A-III, B-IV, C-II, D-I
(3) A-IV, B-III, C-II, D-I
(4) A-III, B-II, C-IV, D-I

Book Page No. # 76

8. Asteroids

- These are small objects such as rocks (mostly debris) which revolve around the Sun.
- They are mostly found in the Asteroid Belt which lies between the orbits of Mars and Jupiter.
- They are too small to be called planets. These are also known as Planetoids or Minor planets.

9. Comets

- Comets are also members of our solar system. They revolve around the Sun in highly elliptical orbits. However, their period of revolution around the Sun is usually very long.
- These are shiny, luminous "Tailed Stars". These are rocky and metallic materials surrounded by frozen gases.
- They travel towards the Sun. Their tail faces opposite of the sun and their head faces towards the Sun. They become visible when they travel close to the Sun.
- Halley's Comet is the most famous comet which comes close to the Earth every 76 years. It last appeared in 1986 and will next appear in 2061.
- Some people think that comets are messengers of disasters, such as wars, epidemics and floods. But these are all myths and superstitions.

Question # 117

Which of the following gases has the highest concentration in the atmosphere?

(1) Oxygen

(2) Carbon dioxide

(3) Nitrogen

(4) Sulphur dioxide

Book Page No. # 83

- **Composition of air :** Air contains 78% Nitrogen, 21% oxygen, 0.9% Argon, 0.03% carbon dioxide and 0.07% other constituents of air.

Question # 118

Global Warming is **not** responsible for :

(1) Increase in sea level

(2) More severe storms

(3) Increased droughts

(4) More earthquakes

Book Page No. # 84

- **Effects of global warming :** Melting of ice cap and glacier, increase in frequency of floods, soil erosion and unseasonal rains, loss of biodiversity due to the extinction of coral reefs and other species and spreading of waterborne and insectborne diseases are some effects of global warming

Question # 119

119 Identify the multicellular microorganism from the following :

A. Bacteria

B. Aspergillus

C. Paramaecium

D. Penicillium

Choose the correct option from the following :

(1) A only

(2) A and B only

(3) B, C and D only

(4) B and D only

Book Page No. # 90

S. No.	Micro-organisms	Characteristics
1.	Bacteria	• These are simplest unicellular organisms having rigid cell walls like plant cells. Thus, bacteria are small prokaryotes with no cell organelles like mitochondria or chloroplasts. • Based on their shapes, bacteria are of four types, *i.e.*, **bacillus** (rod-shaped), **coccus** (spherical-shaped), **spirillum** (spiral-shaped) and **vibrio** (comma-shaped), *e.g.*, Lactobacillus, Rhizobium. • Causes diseases like TB, typhoid, cholera.
2.	Fungi	• It is a large group of organisms which do not have chlorophyll and do not photosynthesise, thus are heterotrophs. They are found in colonies, *e.g.*, Yeast, Penicillium, Aspergillus and Rhizopus (bread mould).

Question # 120

Arrange the rolling, sliding and static friction in increasing order of friction and choose the correct option.

(1) Rolling, Static, Sliding

(2) Rolling, Sliding, Static

(3) Static, Sliding, Rolling

(4) Static, Rolling, Sliding

Book Page No. # 34

It is important to note that **Static Friction > Sliding Friction > Rolling Friction**

Question # 121

Which of the following is not a Rabi crop?

(1) Wheat

(2) Pea

(3) Mustard

(4) Paddy

Book Page No. # 103

(i) **Kharif Crops (Rainy Crops) :** The crops which are sown in the rainy season (*i.e.*, they are planted from June and harvested in September or October) are called kharif crops. Paddy, maize, soya bean, groundnut and cotton are kharif crops.

(ii) **Rabi Crops (Winter Crops) :** The crops grown in the winter season (*i.e.*, they are planted from October/ November and harvested in March/April) are called rabi crops. Examples of rabi crops are wheat, gram, pea, mustard, and linseed.

(iii) **Zaid Crops (Summer Crops) :** The crops which are grown in the summer season are called zaid crops. Muskmelon, watermelon and cucumber are examples for zaid crops

Question # 122

2 Identify the methods for replenishing the soil with nutrients from the following :

A. Growing different crops alternately.

B. Usage of manures.

C. Sowing healthy seeds.

D. Growing legumes as fodder in one season and wheat crop in the next season.

Choose the correct option from the following :

(1) A, C and D

(2) A, B and D

(3) A and D

(4) B and C

Book Page No. # 103

Different activities in crop production are ploughing, sowing, applying fertilizers, harvesting and seed storage. All these activities collectively have an effect on the yield of crops.

Question # 123

The magnitude of the power of an earthquake is expressed on a scale called

(1) Richter scale

(2) Vernier scale

(3) Ratio scale

(4) Graphic scale

Book Page No. # 99

- The magnitude of an earthquake can be measured by the **Richter Scale** and **Mercalli Scale.**

Question # 124

Calorific value of a fuel is expressed in :

(1) Joule

(2) Kilo Joule per kg (kJ/kg)

(3) Kilo Joule

(4) Kilo Joule/m^2

Book Page No. # 5, 6

(ii) **Calorific Value :** It is the quantity of heat produced by the complete combustion of 1 kg of fuel at constant pressure and normal conditions. In case of liquid or gaseous fuels to measure the calorific value, their volumes are taken into consideration while for solid fuels their masses are taken into account. It is measured in **Kilo Joule per Kilogram (kJ/Kg). The more the calorific value of a fuel, the more is the efficiency of the fuel.**

$$\text{Calorific Value} = \frac{\text{Amount of heat liberated}}{\text{Total mass or volume of fuel}}$$

Question # 125

Tin cans are made by electro plating tin on to iron because Tin :

(1) is less reactive than Iron

(2) is more reactive than Iron

(3) does not react with Iron

(4) and Iron both are least reactive

Book Page No. # 70

Tin cans, used for storing food, are made by electroplating tin onto iron. Tin is less reactive than iron. Thus, food does not come into contact with iron and is protected from getting spoilt.

Sainik School Class 9th
Subject –English

Subject	No of Ques asked from our book	Total Ques	Ques No.
English	14	25	77,78,80,81,82,83,84,86,92,94,95,98,99,100

Question # 77

Change the given sentence to indirect narration :

Rita said to me, "I never eat junk food."

(1) Rita told me that she never ate junk food.

(2) Rita said to me that she never eats junk food.

(3) Rita said that she never ever eats junk food.

(4) Rita told me that I never ate junk food.

Book Page No. # 190, 191

2. Change in Tense

The direct sentence has two parts. The first (*the reporting speech*) introduces the person who speaks and the time (*Present, Past* or *Future*) when he spoke. The second part the reported speech tells what were the exact words of the speaker when he spoke. This reported speech (*i.e.* what he spoke) may be in any tense and is put within inverted commas. The first thing in changing it into indirect is to establish a *congruency* or *consistency* between the tenses of the two parts.

Examples :

- Indirect : He said to me, "My father died last year."
  Direct : He told me that his father had died the previous year.

Question # 78

78 Change the given sentence to indirect narration :

They said to Rahul, "We are watching cricket."

(1) They said Rahul that they are watching cricket.

(2) They told Rahul that they were watching cricket.

(3) They told Rahul that they are watching cricket.

(4) They told Rahul that they have been watching cricket.

Book Page No. # 190

3. Use of Conjunction Between the Two Parts

I. When the reported speech is a mere *statement (assertive or negative)* or *an exclamatory sentence* the conjunction **that** is used between the Reporting and the Reported Speech to unite them.

Examples :

- Direct : He said to Raman, "It is quite dark."
  Indirect : He said to (or told) Raman that it was quite dark.
- Direct : He said, "What a beautiful child !"
  Indirect : He exclaimed that it was a very beautiful child.

Question # 80

Choose the correct option indicating the meaning of the given sentence :

She is too slow to be a runner.

(1) She is so slow to be a runner.

(2) She is slow to run.

(3) She is so slow that she cannot be a runner.

(4) She is too slow, she couldn't be a runner.

Book Page No. # 185

22. Choose the correct alternative for the following sentences.

He was too slow to win the race.

(A) He is so slow that he cannot win the race.

(B) He was so slow that he could not win the race.

(C) He was too slow that he cannot win the race.

(D) None of these.

22. (B)

Question # 81

Choose the correct Question Tag for the following sentence :

It is quite hot outside today, _____ ?

(1) is it

(2) isn't it

(3) doesn't it

(4) aren't it

Book Page No. # 167

I. A negative tag is added to a positive statement while a positive tag is added to a negative statement :

Examples :

- He is very hungry, isn't he ?
- It isn't very cold today, is it ?

It may be noted that it is not only the negative verb that forms a negative sentence. It is rather the essence or idea of the sentence. The negative idea may be conveyed by :

Question # 82

Choose the correct conjunction for the following : +ve -ve

This is ~~the ring~~ _____ she gifted me.

~~(1) beside~~

~~(2) where~~

(3) that

(4) if

Book Page No. # 156

Subordinating conjunctions introduce either a noun clause or an adverb clause.

(i) The most common conjunction used before a noun clause is that :

Examples : • I know that he is an honest man.

Question # 83

Fill in the blank :

Neither she _____ he was present in the class.

(1) nor

(2) or

(3) and

(4) but

Book Page No. # 158

XII. Correlatives **either.....or, neither....nor, both ... and, not only... but also** must be placed immediately before the words they relate to :

Question # 84

Fill in the blank :

_____ she lost her daughter.

(1) Hello!

(2) Alas!

(3) Hurrah!

(4) Look!

Book Page No. # 160

Definition

An interjection is a word which expresses some sudden feeling or emotion.

The Emotions that the Interjection Express

Emotions	Interjections	Example
1. Joy	Hurrah!, Hurrey!, Ha-Ha!, Hip-Hip-Hurrah!	1. Ha-Ha! I have got my new car. 2. Hurrey! I have got admission in the university.
2. Grief	Alas!, Ah!, Oh!	1. Alas! She is no more. 2. Ah! My son has failed again.
3. Surprise	Oh!, What!, Ha!	1. Oh! You are here. 2. What! Is that so ?
4. Appreciation or Approval	Bravo!, Hear-Hear!	1. Bravo! You have done well. 2. Hear-Hear! Correct answer.
5. Contempt	Pooh!, Fie!	1. Pooh! How dirty.

Question # 86

Change the given sentence to Passive Voice :

People speak different languages all over the world.

(1) Different languages are spoken all over the world.

(2) Different languages were being spoken all over the world.

(3) Different languages was spoken all over the world.

(4) Different languages were spoken all over the world.

Book Page No. # 186

There is a general notion that the Subject of a sentence of Active Voice is changed into Object and the Object is changed into Subject while changing it from Active to Passive. It becomes necessary only when the Subject is a Personal Noun or Pronoun. If it is a general one it does not become the Object of the Passive Structure. No object is required. *e.g.* Someone, some body, everybody, they, people etc. are dropped.

Active : Some people do not cast their votes.

Passive : Some votes are not cast.

Question # 92

Choose the correct sentence having an adverb :

(1) He waited long for me.

(2) He went on a long journey.

(3) He came by an early flight.

(4) He is of my near relation.

Book Page No. # 148

1. Definition

The words that modify a verb, and adjective or another adverb are known as adverbs :

Examples :

- He walks (Main verb) slowly Adv.
- He is kind Adj. enough Adv.
- She speaks quite Adv. clearly. Adv.

The furniture was arranged beautifully, (modifies the verb 'arranged')

Examples :

- It was a very precious diamond, (modifies adjective 'precious')
- She gave the reply quite frankly. (modifies the adverb 'frankly')

Question # 94

Fill in the blank with correct conjunction:

She is rich _____ she is not contented.

(1) since

(2) yet

(3) as

(4) while

Book Page No. # 156, 159

(ii) Some coordinating conjunctions are adversative because they express *contrast* or *opposition*. The main Conjunctions of this type are : *But, although, though, yet, still, neverthless, while, whereas etc.*

- *Although* he is only eleven *yet* (not but) he talks like an elderly person.

Passage Question # (95-100)

Read the passage carefully and answer the questions given below : (Q. 95 - 100)

The Walt Disney Company became the first major media company to ban advertisements for candy bars and junk food on its television channels, radio stations and websites, to stop food manufacturers from peddling nutritionally challenged fattening junk for kids. The ban covers foods with too much sugar, too much salt or a full meal more than 600 calories. Predictably, the outraged public said that banning smoking in public places and artery-blocking trans fats in food was bad enough, but stopping them from guzzling comfort drinks by the litres was almost a human rights violation.

It seems most people are not just happy choosing their own poison. They also want it in super-sized doses, guaranteed to kill sooner than later, for after tobacco use, obesity is the biggest public health bugbear that triggers more avoidable diseases and deaths than malnutrition. Overweight and obesity are the leading causes for global deaths, killing 2.8 million adults each year. Worldwide obesity has more than doubled since 1980. The reasons for poor lifestyle

choices are many, with almost all driven by socio-economic causes such as low education and limited income. Like killer infections, obesity and the resultant type-2 diabetes affect the poor more than the affluent, largely because processed and fast food are cheaper and take less or no time to prepare than healthy home-cooked meals. Limiting food choices, however, is not enough.

The need is to get children off their chairs and into the playgrounds. Too much screen time, largely social - networking followed by online and video gaming and television, are making healthy children fat and putting them at risk of type-2 diabetes in the second decade of their lives. The lifestyle disease that interferes with the way the body metabolises glucose typically affects people in their fifties and sixties and is linked with a host of complications.

The official measure of obesity in adults is Body Mass Index (BMI), which is calculated by dividing a person's weight in kilograms by the square of his height in metres (kg/m^2). The WHO definition is: a BMI greater than or equal to 25 is overweight, 30 is obese, but the cut-offs for the South Asians are 23 for overweight and 25 for obese.

Question # 95

095 Obesity affects _____ more than the affluent.

(1) the middle class

(2) the educated

(3) the poor

(4) the sick

Book Page No. # 216 (1-31)

Question # 98

What did the Walt Disney Company ban?

(1) Candy bars

(2) Junk food

(3) The foods were healthy

(4) Advertisement for candy bars and junk food

Book Page No. # 216 (1-31)

Question # 99

What was purpose behind the ban?

(1) The foods were unhealthy

(2) The foods were healthy

(3) The foods were cheap

(4) The foods were costly

Book Page No. # 216 (1-31)

Question # 100

Overweight and obesity are the leading causes for global deaths, killing _____ adults each year.

(1) 2.6 million

(2) 8 million

(3) 8.2 million

(4) 2.8 million

Book Page No. # 216 (1-31)

Sainik School Class 9th
Subject –Maths

Subject	No of Ques asked from our book	Total Ques	Ques No.
Maths	27	50	1,4,6,12,13,16,17,18,22,23,24,26,27,28,30,31, 32,34,35,36,38,39,40,42,45,46,49

Question # 1

If the area of a circle is 2464 cm^2, then the radius of the circle (in cm), is (use $\pi = \frac{22}{7}$):

(1) 24
(2) 26
(3) 28
(4) 56

$\frac{22}{7} \times r^2 = 2464$

7×16

7×4

Book Page No. # 80

- Circumference $= 2\pi r = \pi d$,
- Area of a circle $= \pi r^2$

Question # 4

$(2.5a - 3.5b)^2 - (3.5a - 2.5b)^2 =$

(1) $-6a^2 - 6b^2$

(2) $6b^2 - 6a^2$

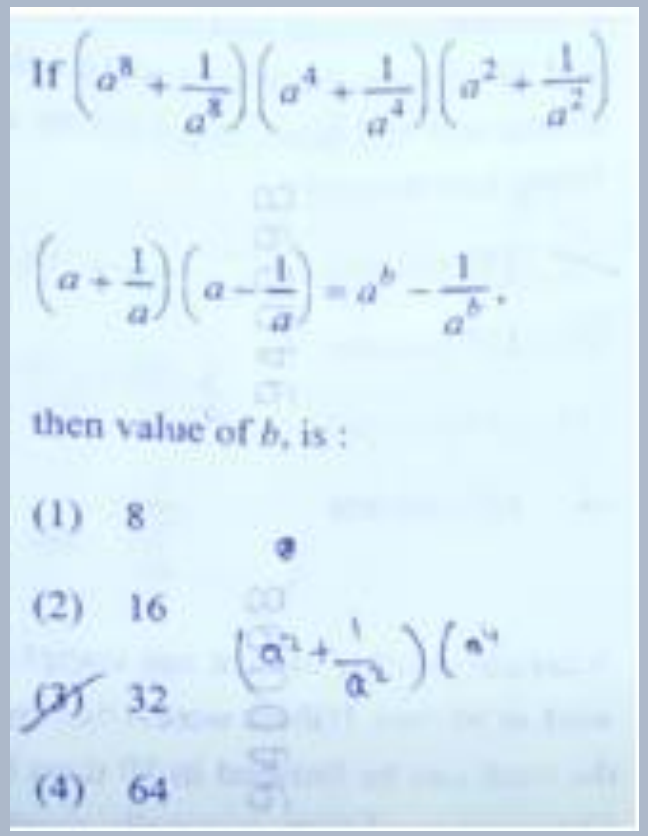
(3) $6a^2 + 6b^2$

(4) $6a^2 - 6b^2$

Book Page No. # 96

$$(a-b)^2 = a^2 - 2ab + b^2$$

Question # 6



If $\left(a^8+\frac{1}{a^8}\right)\left(a^4+\frac{1}{a^4}\right)\left(a^2+\frac{1}{a^2}\right)$

$\left(a+\frac{1}{a}\right)\left(a-\frac{1}{a}\right)=a^b-\frac{1}{a^b}$,

then value of b, is :

(1) 8

(2) 16

(3) 32

(4) 64

Book Page No. # 96

$$a^2-b^2=(a-b)(a+b)$$

Question # 12

If circumference of a circle is 88 cm, then the area of the circle (in cm^2) is (use $\pi = \frac{22}{7}$):

(1) 600

(2) 612

(3) 616

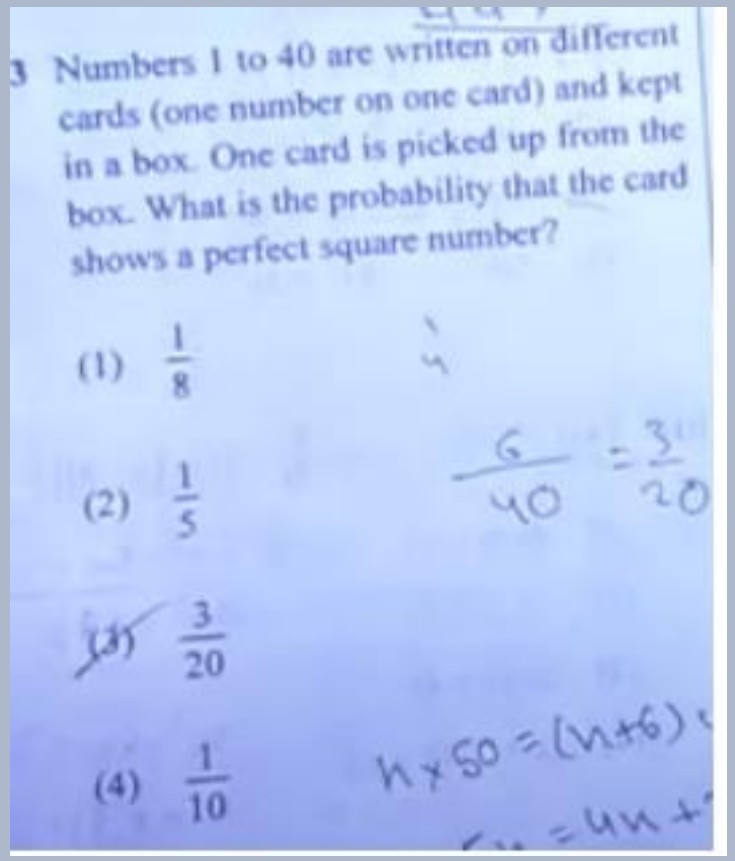
(4) 620

Book Page No. # 80

Circumference $= 2\pi r = \pi d$,

Area of a circle $= \pi r^2$

Question # 13



3 Numbers 1 to 40 are written on different cards (one number on one card) and kept in a box. One card is picked up from the box. What is the probability that the card shows a perfect square number?

(1) $\frac{1}{8}$

(2) $\frac{1}{5}$

(3) $\frac{3}{20}$

(4) $\frac{1}{10}$

Book Page No. # 119

4. From a pack of 52 playing cards, one card is drawn at random. The probability of the drawn card being a black ten or a king is :

(A) 5/26 (B) 3/26

(C) 3/13 (D) 2/13

4. (B) Required probability $= \frac{6}{52} = \frac{3}{26}$

Question # 16

If one angle of a triangle is 63° and remaining two angles are in the ratio 1 : 2, then the measure of the largest angle of the triangle, is :

(1) 63°

(2) 70°

(3) 78°

(4) 82°

$x + 2x = 3x$

$39 = x$

39

78

Book Page No. # 71

The sum of interior angles of a triangle is 180°.

$\angle A + \angle B + \angle C = 180°$

Question # 17

7 If $a : b : c : d = 1 : 2 : 3 : 5$, then the value of $\frac{a^2+b^2+c^2}{b^2+c^2+d^2}$, is:

(1) $\frac{7}{19}$

(2) $\frac{19}{5}$

(3) $\frac{8}{17}$

(4) $\frac{4}{21}$

$\frac{1+4+9}{4+9+25}$

$\Rightarrow \frac{14}{38} = \frac{7}{19}$

Book Page No. # 34

14. If $A : B : C = 2 : 3 : 5$, then find the ratio

$$\frac{B+C}{A} : \frac{C+A}{B} : \frac{A+B}{C}.$$

(A) 4 : 7 : 1 (B) 12 : 7 : 3

(C) 4 : 7 : 3 (D) 4 : 7 : 13

14. (B) $A : B : C = 2 : 3 : 5$

$$\frac{B+C}{A} : \frac{C+A}{B} : \frac{A+B}{C}$$

Put $A = 2$, $B = 3$ and $C = 5$,

$$\frac{3+5}{2} : \frac{5+2}{3} : \frac{2+3}{5}$$

$$= 4 : \frac{7}{3} : 1 = 12 : 7 : 3$$

Question # 18

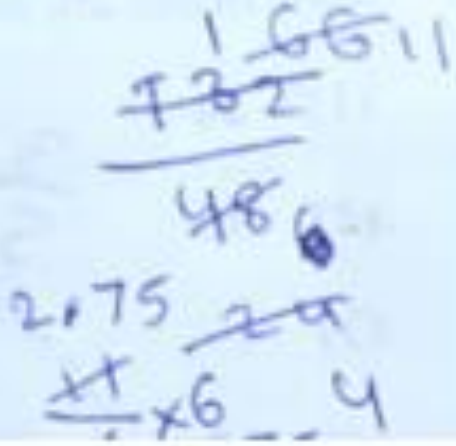
Atul drives a car at a speed of 48 km/h and starts his journey for his hometown 132 km away from residence at 9 am. At what time, will he reach his hometown?

(1) 11 am

(2) 11:20 am

(3) 11:40 am

(4) 11:45 am



Book Page No. # 50

Time

The duration in which an object covers a unit of distance is called time. It is denoted by T or t.

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}} \text{ or } T = \frac{D}{S}$$

Question # 22

What is the greatest value of A for which the 6 digit number 326A50 is divisible by 3?

(1) 2
(2) 6
(3) 8
(4) 9

Book Page No. # 3

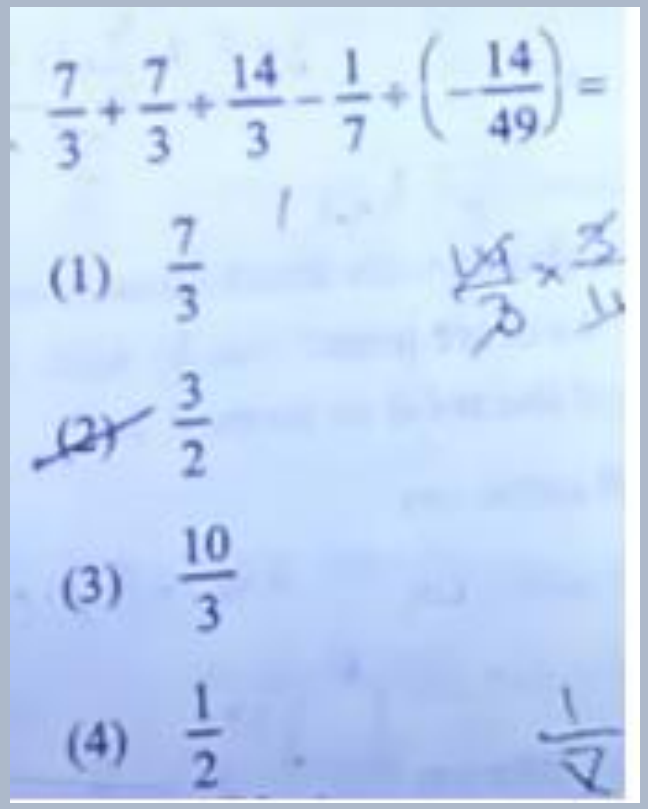
Divisibility by 3 :

A number is divisible by 3, if the sum of all digits of the number is divisible by 3.

Example : 786, here 7 + 8 + 6 = 21 (completely divisible by 3)

So, the number 786 will be divisible by 3.

Question # 23



$$\frac{7}{3}+\frac{7}{3}+\frac{14}{3}-\frac{1}{7}+\left(-\frac{14}{49}\right)=$$

(1) $\frac{7}{3}$

(2) $\frac{3}{2}$

(3) $\frac{10}{3}$

(4) $\frac{1}{2}$

Book Page No. # 30

Vbodmas Rule

This rule is very important for the arithmetical simplification. When Vinculum, Of, Division, Bracket, Subtraction all or two or more than two operations are present in any question, then we can find out the result with the help of VBODMAS Rule. The details of this rule are given below :

Order	Abbreviated	Meaning	Notation
1	V	Vinculum or Bar	–
2	B	Brackets	[ ], { }, ( )
3	O	of	of
4	D	Division	÷
5	M	Multiplication	×
6	A	Addition	+
7	S	Subtraction	–

Question # 24

$$\sqrt{\sqrt[3]{27} - 2 \times \sqrt[3]{8} + \sqrt[3]{125}} =$$

(1) 4

(2) 3

(3) 2

(4) 1

Book Page No. # 22

24. $\sqrt{\sqrt{2500}+\sqrt{961}}=(?)^2$

(A) 81 (B) 3

(C) 6561 (D) 9

24. (B) $\sqrt{\sqrt{2500}+\sqrt{961}}=(?)^2$

$\Rightarrow \sqrt{50+31}=(?)^2$

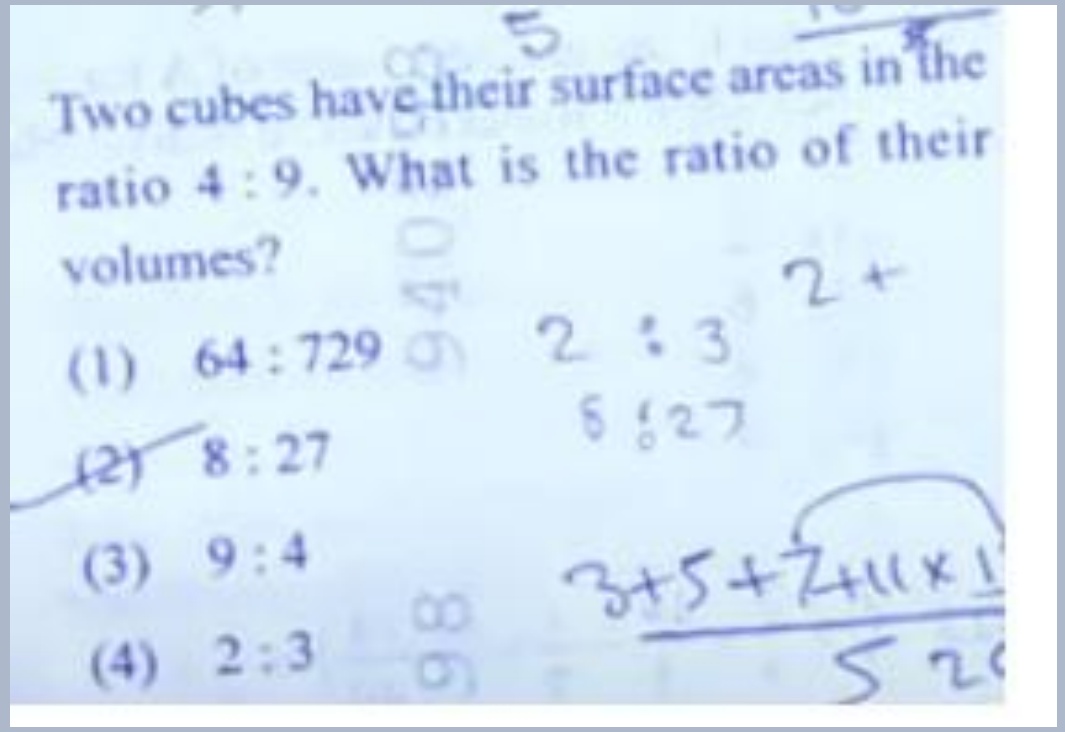
$\sqrt{81}=(?)^2$

$9=(?)^2$

$\sqrt{9}=?$

$?=3$

Question # 26



Two cubes have their surface areas in the ratio 4 : 9. What is the ratio of their volumes?

(1) 64 : 729

(2) 8 : 27

(3) 9 : 4

(4) 2 : 3

Book Page No. # 88

27. Two cubes have their volumes in the ratio 1 : 64. Find the ratio of their surface areas.

(A) 1 : 4 (B) 4 : 1

(C) 16 : 1 (D) 1 : 16

27. (D) Let their sides be m and n. We have,

$$\frac{V_1}{V_2} = \frac{1}{64}$$

$$\frac{m^3}{n^3} = \frac{1}{64} \Rightarrow \frac{m}{n} = \sqrt[3]{\frac{1}{64}} = \frac{1}{4}$$

$\therefore$ Ratio of their surface areas

$$= \frac{6m^2}{6n^2}$$

$$= \frac{m^2}{n^2} = \left(\frac{1}{4}\right)^2 = \frac{1}{16}$$

Question # 27

4 equal cuboids with dimensions 6 cm × 10 cm × 4 cm are joined side by side. The volume of the solid so formed, is :

(1) 240 cubic cm

(2) 480 cubic cm

(3) 864 cubic cm

(4) 960 cubic cm

4 × 4 × 6 × 10

Book Page No. # 87

11. If the length, width and height of a cuboid are 4.2 m, 3 m and 1.1 m respectively, then its capacity (in litres) will be :

(A) 12860 (B) 13860

(C) 14860 (D) 15860

11. (B) Given, length (l), width (w) and height (h) of a cuboid are 4.2, 3 m and 1.1 m respectively.

$\because$ Volume of cuboid $= l \times w \times h$

$= 4.2\ \text{m} \times 3\text{m} \times 1.1\ \text{m}$

$= 13.86\ \text{m}^3$

$\because$ $1\ \text{m}^3 = 1000\ \text{L}$

Hence, its capacity $= 13.86 \times 1000\ \text{L}$

$= 13860\ \text{L}$

Question # 28

Ritu is four years younger than her brother Varun. After 5 years, the sum of their ages will be 70 years. What is the present age of Ritu?

(1) 30 years

(2) $25\frac{1}{2}$ years

(3) 28 years

(4) 32 years

$x+5 \quad x+10$

$2x+15=70$

$2x=55$

$x=\frac{55}{2}$

Book Page No. # 92

Ex. 4 : Present age of rajesh's father is three times of present age of Rajesh. After 5 years, the sum of their ages will be 70 years. Find their present ages.

Sol : Let, Rajesh's present age = x years

Then, Rajesh's father present age = $3x$ years

After 5 years,

Rajesh's age = $(x + 5)$ years

Rajesh's father age = $(3x + 5)$ years

According to question,

$$(x + 5) + (3x + 5) = 70 \quad \text{(given)}$$

$$(x + 3x) + (5 + 5) = 70$$

$$4x + 10 = 70$$

Subtract 10 from both sides,

$$4x + 10 - 10 = 70 - 10$$

or $$4x = 60$$

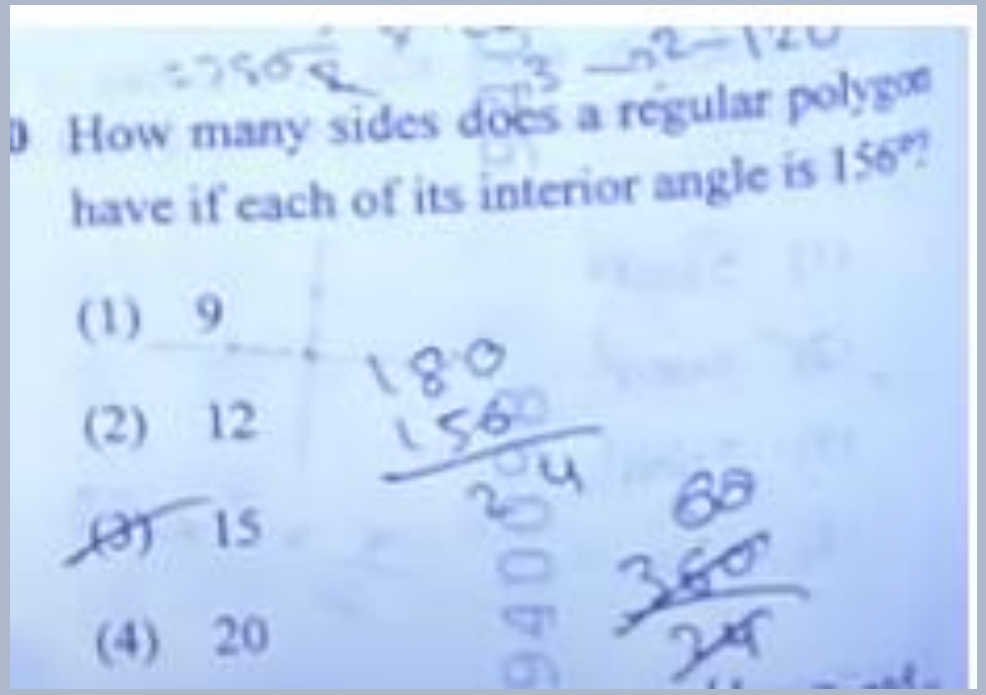
On dividing both sides by 4,

$$x = \frac{60}{4} = 15$$

Hence, Rajesh's present age = 15 years

and Rajesh's father present age = 45 years

Question # 30

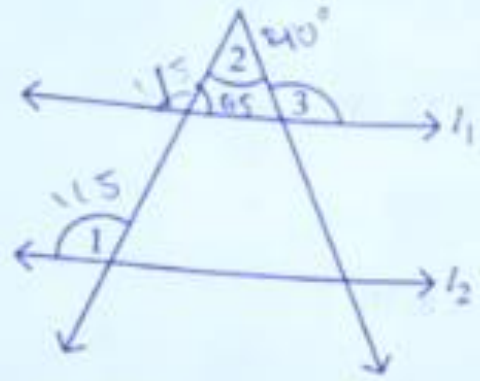


Book Page No. # 73

- If number of sides of a regular polygon is n then.
- Interior angle $= \dfrac{(2n-4)\times 90^\circ}{n}$

Question # 31

031 In the figure, l_1 is parallel to l_2 and $\angle 1 = 115°$, $\angle 2 = 40°$, then $\angle 3$ is equal to:

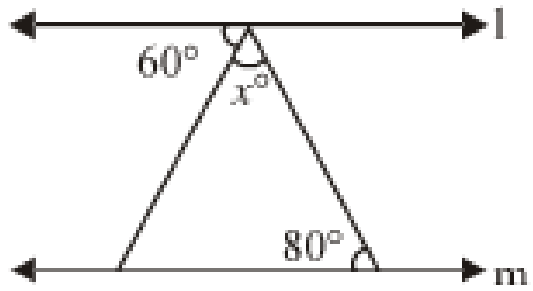


(1) 115°
(2) 110°
~~(3)~~ 105°
(4) 100°

105

Book Page No. # 75

32. In figure, if $l \parallel m$, then find x.



(A) 60° (B) 80°

(C) 40° (D) 140°

32. (C) According to the question,

$$x + 60 + 80 = 180 \quad \text{(Linear pair)}$$

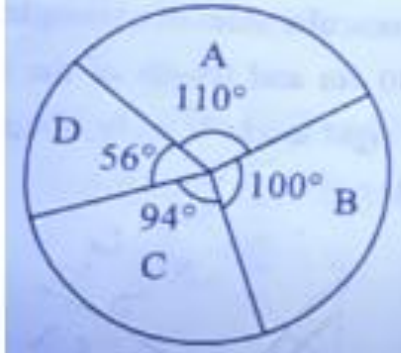
$$\Rightarrow \quad x = 180 - 140 = 40°$$

Question # 32

Survey was done on 900 schools children about their choice of TV programmes -

A. Sports
B. Comedy shows
C. Serials
D. News

Their choices are shown in the Pie chart.

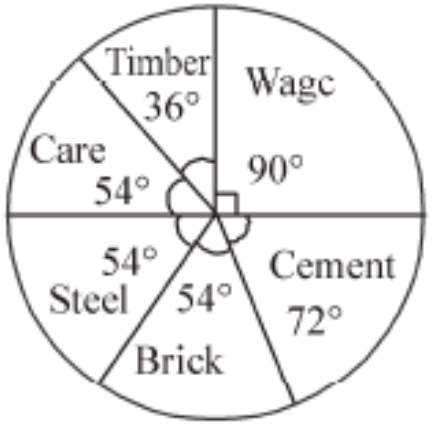


How many children showed interest for Comedy shows? 25

(1) 235
(2) 250
(3) 265
(4) 275

Book Page No. # 117

19. The given pie-diagram shows the cost of building a house. If the total cost of construction of the house is 1500000, then wages will be spent.



(A) ₹ 90,000 (B) ₹ 2,50,000

(C) ₹ 3,60,000 (D) ₹ 3,75,000

19. (D) Wages % $= \frac{90°}{360°} \times 100\%$

$= 25\%$

$\therefore$ ₹ 25% of 15,00,000

$= \frac{25}{100} \times 1500000$

$=$ ₹ 3,75,000

Question # 34

Which of the following statements are true?

A. Cube of any odd number is odd.

B. Cube of a single digit number cannot be a single digit number.

C. A perfect cube may end with exactly two zeroes.

D. Cube of a 2-digit number has at least 3 digits.

(1) A, B, C only

(2) B, C, D only

(3) A, B, D only

(4) A, D only

Book Page No. # 20

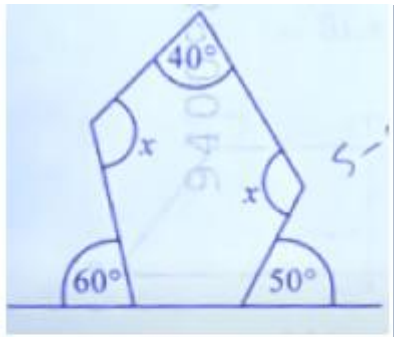
3. CUBE OF NUMBERS

If we multiply a number by itself three times, the product so obtained is called the perfet cube of that number. It is shown by power '3'. If y is the cube of x, then

$$x^3 = y$$

Question # 35

The value of x from the following figure, is :



(1) 35°

(2) 70°

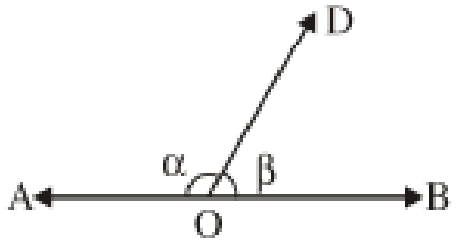
(3) 125°

(4) 250°

Book Page No. # 70, 73

Supplementary Angle

Two angles are called supplementary angles, if their sum is 180°. Example, if $\alpha + \beta = 180°$, then angles α and β are said to be supplementray angles to each other.



$\alpha + \beta = 180°$

Sum of all interior angles $= (2n-4) \times 90°$

$360°$

Question # 36

Madan scored marks given in the following table. Every paper was of 100 marks.

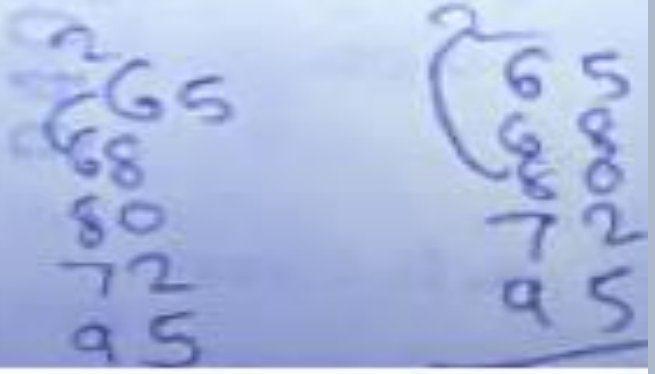
Maths	English	Hindi	Science	Social Science
95	72	80	68	65

His average marks per subject is :

(1) 72

(2) 74

(3) 75



Book Page No. # 106

4.1 Arithmetic Mean or Average

Average value in arithmetic is called arithmetic mean in statistics. Therefore, a value which is obtained by dividing the sum of the values of all terms by the number of terms.

Ex. : If the weight (in kg) of five persons are 50, 54, 53, 52 and 56, then find their arithmetic mean.

Sol. : Average weight = Sum of all observations/Total number of observations

$= (50 + 54 + 53 + 52 + 56) / 5$

$= 265 / 5 = 53$ kg

Hence, the arithmetic mean of all the weights

$= 53$ kg

Question # 38

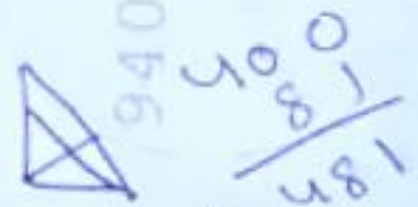
If two perpendicular sides of a triangle are 9 cm and 40 cm and length of the side opposite to right angle is x cm, then the value of x, is :

(1) 39

(2) 40

(3) 41

(4) 42



Book Page No. # 79

- $\text{Hypotenuse} = \sqrt{(\text{Perpendicular})^2 + (\text{Base})^2}$
- $\text{Perpendicular} = \sqrt{(\text{Hypotenuse})^2 - (\text{Base})^2}$

Question # 39

The value of a car depreciates at 10% per annum. Jayant bought the car for ₹ 8,00,000. What will be its value after 3 years?

(1) ₹ 5,83,000

(2) ₹ 5,83,890

(3) ₹ 5,92,000

(4) ₹ 5,83,200

$8000000\left(1-\frac{10}{100}\right)^3$

$\frac{9\times9\times}{}$

Book Page No. # 38

16. The value of a machine is devalued at the rate of 10% per annum. It was purchased three years ago. If its present value is 1,45,800, how much was it bought for?

(A) ₹ 1,80,000 (B) ₹ 2,00,000

(C) ₹ 2,10,000 (D) ₹ 1,75,800

16. (B) Let, 3 years ago, the value of machine was x. So, we have

$$x \times \frac{90}{100} \times \frac{90}{100} \times \frac{90}{100} = 1,45,800$$

$$\Rightarrow x = \frac{145800 \times 100 \times 100 \times 100}{90 \times 90 \times 90}$$

$$\Rightarrow x = ₹\ 2,00,000$$

Question # 40

The median of the data set 3, 11, 8, 9, 6, 7, 12, is

(1) 6

(2) 7

(3) 8

(4) 9

Book Page No. # 108

Ex. : A student got the following marks in the nine question papers :
65, 36, 58, 62, 42, 40, 72, 82, 25
Find the median of the obtained marks.

Sol. : Arrange the obtained marks in ascending order. We have,
25, 36, 40, 42, 58, 62, 65, 72, 82
Here, the total number of terms, $n = 9$, (an odd number)

So, median = value of $\left(\frac{n+1}{2}\right)$ th term

= value of 5^{th} term in the ascending order
= 58 marks

Question # 42

By which smallest number, 2700 must be multiplied so that the new number is a perfect cube?

(1) 6

(2) 10

(3) 15

(4) 18

Book Page No. # 21

15. By what least number should 648 be multiplied to get a perfect cube ?

(A) 3 (B) 6

(C) 9 (D) 18

15. (C) $648 = 8 \times 81 = (2)^3 \times (9)^2$

To make a perfect cube, we will have to multiply by 9.

Question # 45

Pawan bought a second hand TV for ₹ 4,300. He spent ₹ 500 on its repair and sold it for ₹ 5,856. In this transaction, his gain was :

(1) 20%

(2) 21%

(3) 22%

(4) 24%

5856
4800
1056
4800
22
132
× 100
6

Book Page No. # 41

Ex. :

- If a man buys a pen for ₹ 25 and sells it for ₹ 30, then he makes a Profit of $30 - 25 = ₹\ 5$
- If a man buys a pen for ₹ 25 and sells it for ₹ 20, then he makes a Loss of $25 - 20 = ₹\ 5$
- A man buys a pen for ₹ 25 and sells it for ₹ 30, then his gain

$$\% \frac{30-25}{25} \times 100 = \frac{5}{25} \times 100 = 20\%$$

- A man buys a pen for ₹ 25 and sells it for ₹ 20, then loss %

$$= \frac{25-20}{25} \times 100 = 20\%$$

Question # 46

There are 120 students in a hostel and there is food provision for 25 days. How long would these provisions last out if 30 more students join the group?

(1) 30 days

(2) 22 days

(3) 20 days

(4) 17 days

$120 \times 25 = 150 \times x$

$x = 20$

Book Page No. # 47,49

24. There is food provision for 100 men for 30 days. If number of men is reduced to 80, then the number of days the food could last for is

(A) 28 (B) 35

(C) $37\frac{1}{2}$ (D) 37

25. 1200 soldiers in a fort had enough food for 28 days. After 4 days, some soldiers were transferred to another fort and thus the food lasted now for 32 more days. How many soldiers left the fort ?

(A) 300 (B) 400

(C) 200 (D) 100

24. (C) $\text{Men}_1 \times \text{Days}_1 = \text{Men}_2 \times \text{Days}_2$

$$100 \times 30 = 80 \times d$$

$$d = 12.5 \times 3$$

$$= 37.5$$

25. (A) Let the number of soldiers left the fort be x.

According to the given condition,

$$1200 \times 24 = x \times 32$$

$$\Rightarrow \quad x = \frac{1200 \times 24}{32} \Rightarrow x = 900$$

So, the soldiers left the fort

$$= 1200 - 900 = 300$$

Question # 49

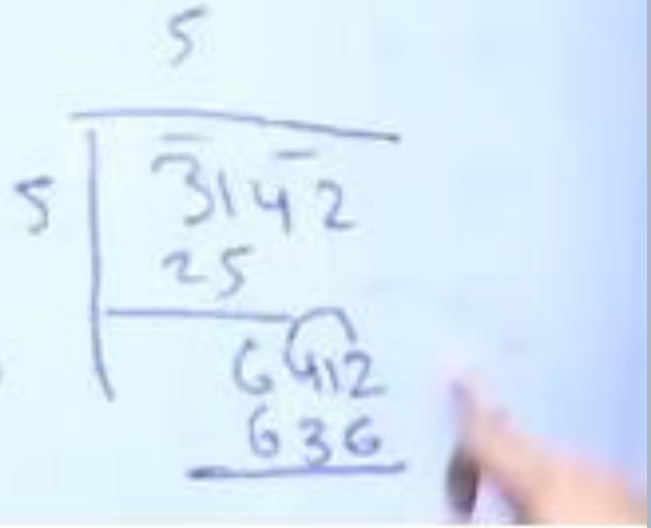
What smallest number should be subtracted from 3142 to get a perfect square?

(1) 5

(2) 6

(3) 7

(4) 8



Book Page No. # 21

13. Which least number must be subtracted from 176 to make it a perfect square ?

(A) 16 (B) 7

(C) 10 (D) 4

13. (B) $176 = 169 + 7 = (13)^2 + 7$

Hence, least number 7 is subtracted to make a perfect square.

Sainik School Class 9th

Subject –Reasoning

Subject	No of Ques asked from our book	Total Ques	Ques No.
Reasoning	23	25	52,53,54,55,56,58,59,60,61,62,63,64,65,66,67, 68,69,70,71,72,73,74,75

Question # 52

Anil, Bobby, Chetan, Deepak and Elen are five friends. Anil is shorter than Bobby but taller than Elen. Chetan is the tallest. Deepak is shorter than Bobby and taller than Anil. Who is in the middle with respect to their heights?

(1) Bobby

(2) Chetan

(3) Deepak

(4) Anil

Book Page No. # 268

1. SEQUENTIAL ORDER TEST

In sequential order test questions, objects/persons are arranged, based on the comparison of some criterion such as age, height, salary, size, length, marks, weight etc.

Ordinarily, we compare the persons/objects using various notations such as equal to (=), less than (<) greater than (>), less than or equal to (≤) and greater than or equal to (≥).

Ex. 1. Umesh is taller than Satish. Suresh is shorter than Neeraj but taller than Umesh then who is the tallest among all ?

(A) Umesh (B) Suresh

(C) Satish (D) Neeraj

Sol. (D) : According to question,

Umesh > Satish

Neeraj > Suresh > Umesh

∴ Neeraj > Suresh > Umesh > Satish

So, Neeraj is the tallest among all.

Question # 53

If February 1, 2004 was Wednesday, what day was March 12th 2004?

(1) Sunday

(2) Saturday

(3) Tuesday

(4) Monday

Book Page No. # 295

7. If we assume 1st January, 1996 as Saturday then what was the day on 31st December, 1996 ?

(A) Sunday (B) Tuesday

(C) Friday (D) Monday

7. (A) 1 January, 1996 → Saturday.
31 December, 1996 → Sunday. +1

In a Leap year, there is a difference of 1 day from 1st January to 31st December.

If 1st January, 1996 was Saturday, then 31st December, 1996 must have been Sunday.

Question # 54

Complete the analogy.

Lizard : Reptile : : Whale : ?

(1) Rodent

(2) Amphibian

(3) Mammal

(4) Ocean

Book Page No. # 233

III. Worker and Tool Relationship

Ex. 'Gun' is related to 'Soldier', in the same way 'Pen' is related to :

(A) Notebook (B) Writer

(C) Stationery (D) Doctor

Sol. (B) : As 'Gun' is a tool used by 'Soldier', same as Pen is tool used by 'Writer'.

IV. Country and Currency

Ex. 'Japan' is related to 'Yen', in the same way as 'Nepal' is related to :

(A) Taka (B) Yuan

(C) Rupee (D) Dinar

Sol. (C) : 'Yen' is the currency of 'Japan', in the same way 'Rupee' is the currency of 'Nepal'.

Question # 55

Find the missing number in the following series :

1, 9, 25, 49, ?, 121

(1) 64

(2) 81

(3) 91

(4) 100

Book Page No. # 250

9. 4, 9, 16, 25, ?, 49

(A) 50 (B) 36

(C) 64 (D) 39

9. (B) The sequence of the series is as follows :

$$\underset{\downarrow}{4}\ \underset{\downarrow}{9}\ \underset{\downarrow}{16}\ \underset{\downarrow}{25}\ \underset{\downarrow}{\boxed{36}}\ \underset{\downarrow}{49}$$

$$(2)^2\ (3)^2\ (4)^2\ (5)^2\ (6)^2\ (7)^2$$

Question # 56

Arrange the following in the chronological order.

A. Birth

B. Death

C. Funeral

D. Marriage

E. Education

Choose the correct answer from the options given below.

(1) A, E, D, C, B

(2) A, C, D, E, B

(3) A, E, D, B, C

(4) A, E, B, D, C

Book Page No. # 242

II. Sequence of Occurrence of Events

Ex. 1. Arrange the following words in a meaningful sequence :

1. Birth
2. Death
3. Funeral
4. Marriage
5. Education

(A) 1, 3, 4, 5, 2
(B) 1, 5, 4, 2, 3
(C) 2, 3, 4, 5, 1
(D) 4, 5, 3, 1, 2

Sol. (B) : It is clear that the given words are based on the life cycle of a man.

First birth comes in man's life, then he goes for education, then marriage, death and finally the funeral is done.

So, the correct order is 1, 5, 4, 2, 3.

Question # 58

Arrange the following in a logical order (Increasing order).

A. Day

B. Week

C. Second

D. Minute

E. Hour

Choose the correct answer from the options given below.

(1) A, B, C, D, E

(2) C, D, E, B, A

(3) C, D, B, E, A

(4) C, D, E, A, B

Book Page No. # 242

I. Sequence of Various Stages in a Process :

Ex. : Arrange the following words in a meaningful order :

1. Wall
2. Sand
3. Cement
4. Brick
5. Water

(A) 1, 2, 3, 5, 4 (B) 2, 1, 3, 4, 5

(C) 2, 3, 4, 5, 1 (D) 2, 3, 5, 4, 1

Sol. (D) : Here, five words are given. First we need to read all five words. Now, we can imagine that this is a question based on construction. We know that the sand is first spread on the ground, then cement is added to the sand and they are mixed. After mixing, water is added to the mixture then the mixture is used with brick to make a wall.

So, the logical sequence of the words is as follows :

Sand → Cement → Water → Brick → Wall

(2) (3) (5) (4) (1)

So, the answer is 2, 3, 5, 4, 1.

Question # 59

Find the odd one out :

(1) Pen

(2) Sharpener

(3) Scale

(4) Stationery

Book Page No. # 239

Ex. 1. Find out the odd one.

(A) Space (B) Sky

(C) Heaven (D) Cloud

Sol. (D) : Except clouds other words are synonyms. A cloud is water vapour in the atmosphere that has condensed into very small water droplets or ice crystal.

Question # 60

How many such 5's are there in the following number sequence each of which is immediately preceded by 3 or 4 but not immediately followed by 8 or 9?

3 5 9 5 4 5 5 3 5 8 4 5 6 7 3 5 7 5 5 4 5 2 3 5 1 0

(1) 3

(2) 4

(3) 5

(4) 6

Book Page No. # 246

1. NUMBER SEQUENCE

In the number series, such questions are asked which are related to the series and to be known according to the given conditions.

Ex. 1. How many such 8 are the numbers in the series of the following, 7 right before, but not immediately after 5 ?

7 8 3 7 8 5 1 2 7 8 3 3 4 7 8 2 5 6 6 8 3

(A) One (B) Two

(C) Three (D) Four

Sol. (C) : According to the question, there are three 8 in the series whose 7 are right before, but not immediately after 5.

7 8 3 7 8 5 1 2 7 8 3 3 4 7 8 2 5 6 6 8 3

Question # 61

Identify the correct water image of the following figure.

(1) 

(2) 

(3) 

(4) 

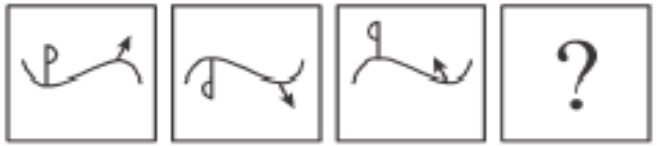
Book Page No. # 307

3. BASED ON WATER IMAGE

In this type of analogy questions, second figure of first pair is water image of first figure. In water image, upper part goes to bottom and bottom part goes to upper.

Ex. 1. : Select a suitable figure from the Answer Figures that would replace the question mark (?).

Question Figures



[SBI (PO), 2001]

Answer Figures

Sol. (A) : From first to second figure,

Second figure is water image of first figure. Figure that reaches lowermost, gets inverted.

Same logic applies to other two figures.

Thus, the correct answer is option (A).

Question # 62

A number is greater than 3 but less than 8. Also, it is greater than 6 but less than 10. The number is :

(1) 5

(2) 6

(3) 7

(4) 8

Book Page No. # 284

6. What number is as much more than 10 as it is less than one half of that from which 50 is 10 less?

(A) 15 (B) 20

(C) 25 (D) 30

6. (B) Let that number $= x$

$$\therefore \quad x - 10 = \frac{50+10}{2} - x$$

$$\Rightarrow \quad 2x = 30 + 10$$

$$x = \frac{40}{2} = 20$$

Question # 63

If DELHI can be coded as CCIDD, how would you code BOMBAY?

(1) AJMTVT

(2) AMJXVS

(3) MJXVSU

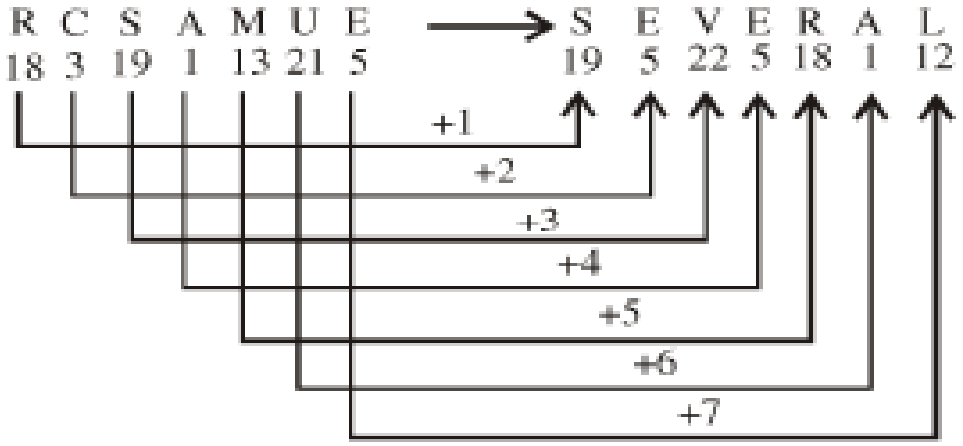
(4) WXYZAX

Book Page No. # 230

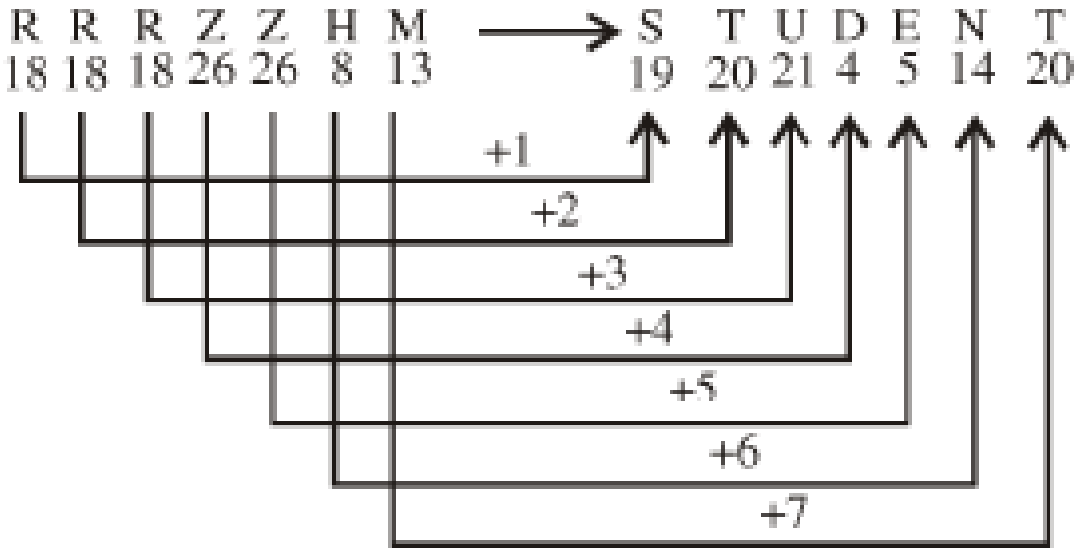
19. If the word 'SEVERAL' is coded as 'RCSAMUE' then find the code for the word 'RRRZZHM' ?

(A) QPOVUBI
(B) SSSAAIN
(C) QQQYYGL
(D) STUDENT

19. (D)



Similarly,



Question # 64

Amit is standing in the North of Bob who is in the West of Chetan on a ground. The position of Amit with respect to Chetan is in the direction :

(1) East

(2) North-West

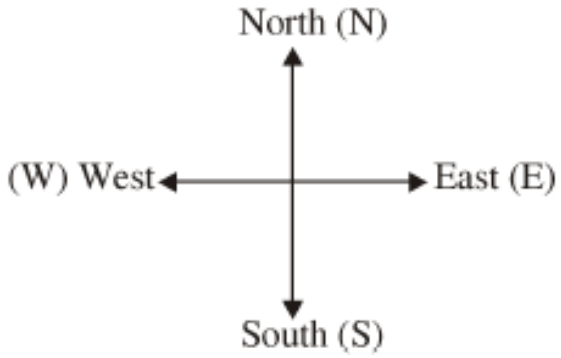
(3) North-South

(4) North

Book Page No. # 262

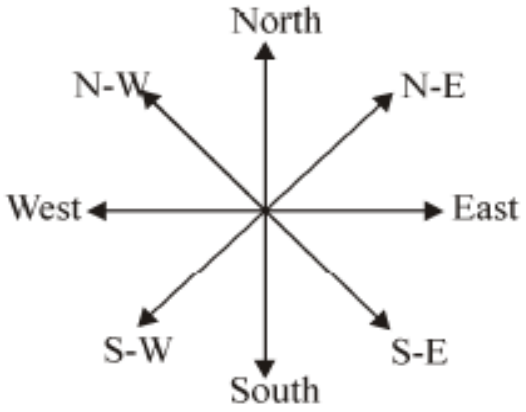
1. MAIN DIRECTIONS

The four main directions are East, West, North, South.



2. SUB DIRECTIONS

The four cardinal directions are North–East (N-E), North–West (N-W), South–West (S-W) and South-East (S-E). These are also known as Sub Directions.



Question # 65

Complete the analogy.

MAN : PDQ : : WAN : ?

(1) NAW

(2) ZDQ

(3) YDQ

(4) YQD

Book Page No. # 234

2. ALPHABET ANALOGY

The questions asked in Alphabet analogy are based on 26 letters of English Alphabets. It contains the set of one or more letters.

II. Relationship based on set of three letters

Ex. FIT : HKV : : JOB : ?

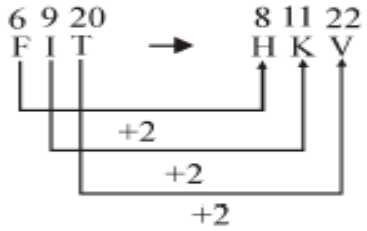
(A) LQD (B) OSH

(C) OKI (D) QRS

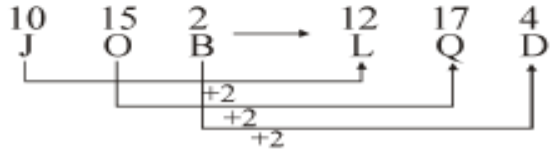
Sol. (A) : As,

Clearly, each letter of first group in a pair moves 2 steps forward to obtain corresponding letter of second group.

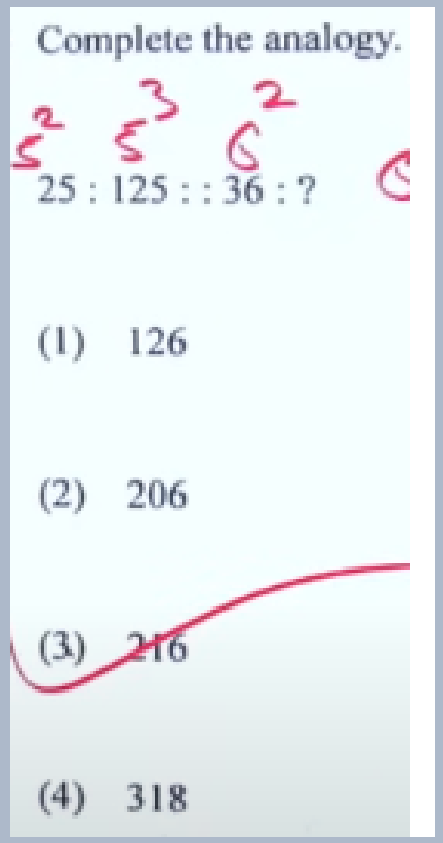
As,



Similarly,



Question # 66



Complete the analogy.

5^2 5^3 6^2

25 : 125 : : 36 : ?

(1) 126

(2) 206

(3) 216

(4) 318

Book Page No. # 234

3. NUMBER ANALOGY

The question asked in Number analogy are based on square-square root, cube-cube root, addition-subtraction, multiplication-divide, even-odd of numbers.

I. Square Based Relation

Ex. 5 : 25 : : 11 : ?

(A) 30 (B) 121

(C) 80 (D) 150

Sol. (B) :

$5^2 = 25$

$11^2 = 121$

$? = 121$

Question # 67

067 Find the missing number :

(1) 12

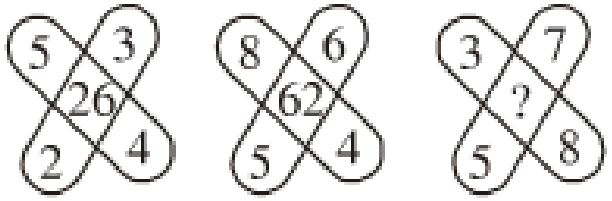
(2) 14

(3) 15

(4) 18

Book Page No. # 254

Ex. 6.



(A) 71 (B) 59

(C) 62 (D) 55

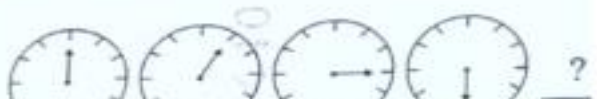
Sol. (B) : As, $(5 \times 4) + (3 \times 2) = 20 + 6 \Rightarrow 26$

and, $(8 \times 4) + (6 \times 5) = 32 + 30 \Rightarrow 62$

Similary, $(3 \times 8) + (7 \times 5) = 24 + 35 \Rightarrow \boxed{59}$

Question # 68

068 Find the next pattern in the sequence.



?

(1)

(2)

(3)

(4)

Book Page No. # 306

1. BASED ON FIGURE ROTATION

In this type of analogy questions, we need to establish a similarity between the first two figures and then apply the same rule to the other two figures and find the missing figure.

If the question is based on rotation then we need to determine how much do the figures in the question rotates in comparison to each other. Once you have established the angle of rotation then you need to check on the other two.

Question # 69

Find the missing number :

(1) 25

(2) 37

(3) 41

(4) 47

Book Page No. # 253

Ex. 3.

5	6	3
25	42	21
2	10	20
7	17	?

(A) 72 (B) 26

(C) 27 (D) 73

Sol. (C) : Ist column : $25 \div 5 \rightarrow 5, 5 + 2 \rightarrow 7$

IInd column : $42 \div 6 \Rightarrow 7$

$7 + 10 \Rightarrow 17$

IIIrd column : $21 \div 3 \Rightarrow 7$

$7 + 20 \Rightarrow \boxed{27}$

Question # 70

Complete the analogy :

3 : 11 : : 7 : ?

(1) 42

(2) 29

(3) 38

(4) 51

Book Page No. # 234

3. NUMBER ANALOGY

The question asked in Number analogy are based on square-square root, cube-cube root, addition-subtraction, multiplication-divide, even-odd of numbers.

I. Square Based Relation

Ex. 5 : 25 : : 11 : ?

(A) 30 (B) 121

(C) 80 (D) 150

Sol. (B) :

$5^2 = 25$

$11^2 = 121$

$? = 121$

Question # 71

Complete the following analogy :

Y : 2 : : T : ?

(1) 9

(2) 7

(3) 8

(4) 12

Book Page No. # 227

4. OPPOSITE LETTERS

Questions based on coding-decoding are also found on the basis of the opposite letters. First we know that what are opposite letters ? Opposite letters can be learnt in the following way :

Ex. In English alphabet, the first letter from left is A and the first letter from right is Z, are opposite to each other.

The second letter from left side is B and the second letter from right side is Y, are opposite to each other.

i.e.,

	1	2	3	4	5	6	7	8	9	10	11	12	13
From Beginning	A	B	C	D	E	F	G	H	I	J	K	L	M
From End	Z	Y	X	W	V	U	T	S	R	Q	P	O	N
	26	25	24	23	22	21	20	19	18	17	16	15	14

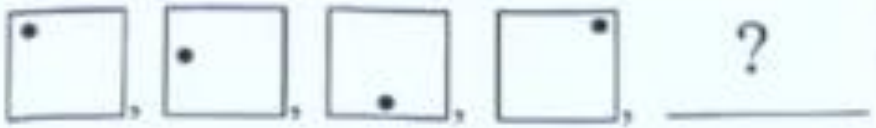
Trick to Remember

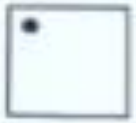
A	B	C	D	E	F
Z	Y	X	W	V	U
(A to Z)	(Boy)	(Crax)	(Dew)	(Evening)	(Few)

G	H	I	J	K	L	M
T	S	R	Q	P	O	N
(G.T. Road)	(Honey Singh)	(Indian Railway)	(Jaipur Queen)	(P.K.)	(Love)	(Man)

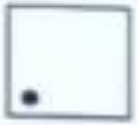
Question # 72

072 Find the next pattern in the sequence.



(1) 

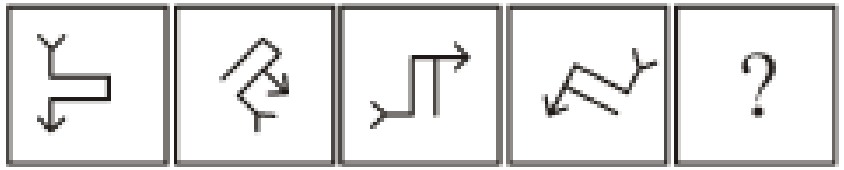
(2) 

(3) 

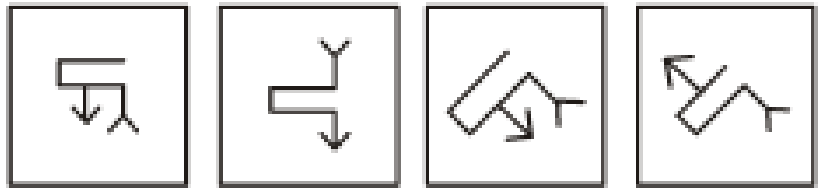
(4) 

Book Page No. # 311

14. Question Figures



Answer Figures



(A) (B) (C) (D)

14. (A) In each next time, figure rotates 45° in anticlockwise direction and an arrow shifts to next side whereas an arrow shifts half side in

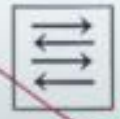
Question # 73

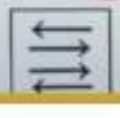
073 Replace the question mark in the following series :

Choose the correct answer from the options given below.

(1) 

(2) 

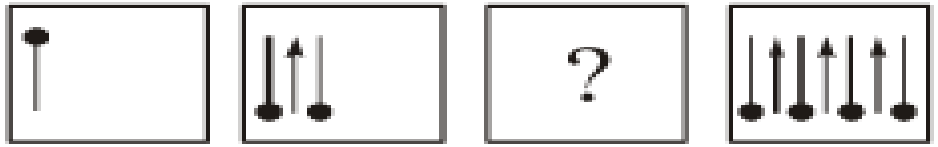
(3) 

(4) 

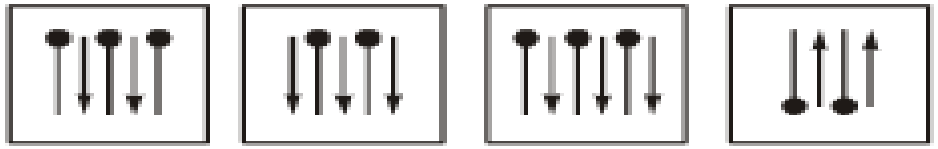
Book Page No. # 311

12. Each question given below has two groups of figures. One is for the question figures, second is for the answer figures, question figures are given in a series. Choose the figure that comes in place of the question mark (?)

Question Figures



Answer Figures



(A) (B) (C) (D)

12. (A) Designs are rotated and two designs are being added.

Question # 74

Arrange the following words as per order in the dictionary.

A. Consume

B. Consciousness

C. Conscience

D. Conservation

E. Consequence

Choose the correct answer from the options given below.

(1) C, B, A, E, D

(2) C, A, B, E, D

(3) C, E, B, D, A

(4) C, B, E, D, A

Book Page No. # 222

8. 1. Consume 2. Consciousness
3. Conscience 4. Conservation
5. Consequence

(A) 3, 2, 1, 5, 4
(B) 3, 1, 2, 5, 4
(C) 3, 5, 2, 4, 1
(D) 3, 2, 5, 4, 1

8. (D) According to dictionary

3. Cons c ience
2. Cons c iousness
5. Cons e quence
4. Cons e rvation
1. Cons u me

Option (D) is right.

Question # 75

Find the odd one out :

(1) 13

(2) 17

(3) 37

(4) 63

Question # 75

Find the odd one out :

(1) 13

(2) 17

(3) 37

(4) 63

Book Page No. # 239

Ex. 1. Find out the odd number.

(A) 25 (B) 9

(C) 16 (D) 18

Sol. (D) : 25, 9 and 16 are Complete Square but 18 is not a Complete Square.

Sainik School Class 9th

Subject – Social Study

Subject	No of Ques asked from our book	Total Ques	Ques No.
Social Study	13	25	127,128,131,136,137,139,141,142,146,147,148, 149,150,

Question # 127

For how many years is a Gram Panchayat elected?

(1) 1

(2) 3

(3) 2

(4) 5

Book Page No. # 264

(ii) Gram Panchayat

- Members of Gram Panchayat are elected for a period of 5 years.

Question # 128

Which one of the following may be called a 'dwarf' planet?

(1) Pluto

(2) Saturn

(3) Mercury

(4) Venus

Book Page No. # 76

Do you know?

Dwarf planets are small celestial bodies found beyond the planet Neptune. They are extremely cold and dark. They are almost spherical in shape, but unlike planets they can share their orbit with other dwarf planets. The five dwarf planets of the solar system are Pluto, Ceres, Eris, Makemake and Haumea.

Question # 131

Which of the following is a human made resource?

(1) Technology

(2) Water

(3) Copper

(4) Natural gas

Book Page No. # 168

(iii) Human Resources

- Human resource refers to the number and abilities of the people.
- People can make the best use of nature to create more resources when they have the knowledge, skill and the technology.
- People are human resources. Improving the quality of people's skills so that they are able to create more resources is known as human resource development.

Question # 136

Which of the following soldiers was hanged to death on 29 March 1857?

(1) Bhagat Singh

(2) Rajguru

(3) Sukhdev

(4) Mangal Pandey

Book Page No. # 145

4. 29th March, 1857 is a significant date because :
   (A) Mangal Pandey was hanged to death.
   (B) Mangal Pandey was sent to prison.
   (C) Mangal Pandey fled prison.
   (D) Mangal Pandey killed his officers

4. (A)

Question # 137

Where were the Mughal emperor Bahadur Shah Zafar and his wife Begum Zinat Mahal sent to prison?

(1) Delhi

(2) Meerut

(3) Rangoon

(4) Lucknow

Book Page No. # 144

- Delhi was recaptured by General John Nicholson on 20 September, 1857 and deportation of Bahadur Shah II to Rangoon where he died in 1862.

Question # 139

Who created the sacred space Dharmsal?

(1) Baba Guru Nanak

(2) Kabir

(3) Tukaram

(4) Eknath

Book Page No. # 138

11. Baba Guru Nanak

- Baba Guru Nanak (1469-1539) was born at Talwandi (now Nankana Sahib, Pakistan). He travelled widely before finally settling down at Kartarpur, a town on the bank of River Ravi. This town is now known as Dera Baba Nanak.
- He started the community kitchen (langar) where all his followers irrespective of their caste, creed and gender ate together. The sacred space created for the purpose of langar was called dharamshala. These dharmsalas are now called gurudwaras.

Question # 141

Who began a campaign against the practice of Sati?

(1) Rammohun Roy

(2) Ishwarchandra Vidyasagar

(3) Jyotirao Phule

(4) Shri Narayana Guru

Book Page No. # 160

Sati System :

- In the early years of the 19th century, sati was in practice in various Parts of Bengal, western India and southern India. In 1811, Jagan Mohan Roy, brother of Rammohan Roy, passed away and his wife was burnt along with him. Rammohan Roy was moved to the extreme at the sight of it and took an oath that he would have the cruel practice abolished by law.
- He carried on a continuous agitation through press and platform for the abolition of Sati. Raja Rammohan Roy published his tracts in 1818-20, making the point that the rite of Sati was not enjoined by the Sastras.

Question # 142

Where is The Tata Iron and Steel Company situated?

(1) On the banks of Hooghly river

(2) On the banks of Son river

(3) On the banks of Ganges

(4) On the banks of Subarnarekha

Book Page No. # 224

- **Jamshedpur**
  - Before 1947, only one iron and steel plant in the country.
  - Tata Iron and Steel Company Limited (TISCO)-was privately owned
  - After Independence, the government took the initiative and set up several iron and steel plants.
- TISCO–started in 1907 at Sakchi, near the confluence of the rivers Subarnarekha and Kharkai in Jharkhand.
- Later Sakchi was renamed as Jamshedpur.

Question # 146

Ox bow lakes are found in

(1) Mountains

(2) Deserts

(3) Glaciers

(4) River valleys

Book Page No. # 182

- **Ox-Bow Lake** - Due to continuous erosion and deposition along the sides of the meander, the ends of the meander loop come closer and closer. In due course of time the meander loop cuts off from the river and forms a cut off lake, also called an Ox-bow lake

Question # 147

147. Match List I with List II :

List I	List II
A. Biotic	I. Rivers, Lakes, Seas, Oceans
B. Hydrosphere	II. Thin layer of air
C. Atmosphere	III. Hard top layer of the earth
D. Lithosphere	IV. The world of living organisms

Choose the correct option from the answers given below :

(1) A-I, B-II, C-III, D-IV

(2) A-II, B-III, C-I, D-IV

(3) A-III, B-I, C-II, D-IV

(4) A-IV, B-I, C-II, D-III

Book Page No. # 174

Do you know?

- The **lithosphere** is the solid outer part of the Earth. Please note that The terms 'lithosphere' and 'crust' are not the same. The lithosphere includes the crust and the uppermost part of the mantle. All terrestrial planets have a lithosphere. The lithospheres of Mercury, Venus, and Mars are much thicker and more rigid than that of the Earth.
- The **atmosphere** is a thin layer of gases that surrounds the Earth. & The **hydrosphere** is the watery part of the Earth's surface including oceans, rivers, lakes and water vapour.
- The **biosphere** is the layer of Earth where life exists.
- The ancient city of Petra in Jordan is an example of an entire city carved out of rocks. There are many specimens of magnificent rock-cut architecture in India, like the Ajanta and Ellora caves in Maharashtra, the Aihole and Badami temples in Karnataka, the Konark temple in Odisha and Mamallapuram in Tamil Nadu.

Question # 148

Where are mushroom rocks found?

(1) Valleys

(2) Glaciers

(3) Hills

(4) Deserts

Book Page No. # 183

- An active agent of erosion and deposition in the deserts is wind. In deserts you can see rocks in the shape of a mushroom, commonly called **mushroom rocks**.

Question # 149

Which of the following is formed by the material carried by glaciers?

(1) Flood plains

(2) Moraines

(3) Beach

(4) Loess

Book Page No. # 183

- **'U' Shaped Valley** is found beneath the glaciers which is deepened and widened by the

lateral and vertical erosion. The material carried by the glacier such as rocks - big and small, sand and silt get deposited. These deposits form **glacial moraines**

Question # 150

Which of the following are the key features of the Constitution of India?

A. Federalism

B. Parliamentary form of Government

C. Separation of Powers

Select the correct answer using the code given below :

(1) A and B only

(2) B and C only

(3) A and C only

(4) A, B and C

Book Page No. # 234

(i) Federalism

(ii) Parliamentary form of Government

(iii) Separation of Powers

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