NILACHAL EDUCATIONAL TRUST

ODISHA VIDYARATNA AWARD

CLASS – IX

Time : 3 Hrs. **Full mark : 120**

Instructions to the candidates :

- All questions are compulsory. Candidates should write the answers only in the blank space provided.
- Candidates are advised to attempt either the Odia medium or the English medium questions as per their choice.
- There will be no negative marking for any wrong answer.
- Do the rough works on the sheet attached at the end of question paper.

ENGLISH

A. Fill in the blanks with the correct form of the verb (Be).

Q1. The poet and novelist _____dead.

Q2. The horse and carriage _____arrived.

Q3. The jury _____found the man innocent.

Q4. The gardener _____his job efficiently.

Q5. Trees _____an important part of our ecosystem.

B. Fill in the blanks with the appropriate preposition.

Q6. I shall have finished the work _____tomorrow.

Q7. By next April we shall have been leaving _____the USA.

Q8. The dog ran _____the swimming pool.

Q9. The students were asked _____assemble in the auditorium _____11 a.m.

Q10. Put the clothes _____the bed.

C. Re-write the following sentences using the correct form of verbs in the bracket.

Q11. The car (break down) yesterday but the mechanic (repair) it.

Q12. The temperature (soar) to 450 C but it (again come) down.

Q13. Hasn't she (return) from the school yet?

Q14. There are pools of water in the field. It (rain) for three hours now.

Q15. He (apply) for a visa and is still waiting for it.

D. Fill in the blanks with the correct form of verb given in the bracket.

Q16. Since he changed his job, he _____ (found) more time to relax and enjoy his hobby.

Q17. The train _____ (depart) before we reached the station.

Q18. Mummy, tell papa that his phone _____ (rang) while he _____ (have) his bath.

Q19. The entertainment program _____ (end) by now.

Q20. I will _____ (complete) this task at this time.

E. <u>Fill in the blanks using the appropriate determiners.</u>

Q21. _____ politicians are honest and should be chosen as our representatives.

Q22. _____of the shops are closed on Sunday.

Q23. _____is the most frightening horror story read by me.

Q24. _____friends he has are all very poor.

Q25. _____grain they had was damaged by sea water.

Q26. The District Magistrate visited _____flood affected area.

Q27. I have watched _____movie by late B. R. Chopra

Q28. People stood in _____side of road.

Q29. There is _____ice-cream left. Who will eat it?

Q30. The rain was pouring down in torrents but there wasn't _____wind.

F. <u>Fill in the blanks with appropriate modals.</u>

Q31. Suman _____swim. You _____not allow her go to swimming pool.

Q32. Preeti _____easily win today's match hadn't she hurt her knees.

Q33. In India, the death due to road accidents _____increased drastically.

Q34. Wider road awareness among road users _____be taught.

Q35. More stringent laws _____be enforced while issuing license.

Q36. Cross border terrorism _____increase if there is no check now.

Q37. I hope the terrorist _____realise their moral obligations.

Q38. Kill the sin not the sinner, hence the terrorist _____not be punished.

Q39. Mohan is not keeping well now a days. He _____ get well unless he visits a doctor.

Q40. He should take rest and proper medicine _____ he should fall seriously ill.

SCIENCE

Q1. 50 kg ର ବସ୍ତୁତ୍ୱ ବିଶିଷ୍ଟ ଏକ ବସ୍ତୁ ଉପରେ ଏକ ସ୍ଥିର ବଳ ପ୍ରୟୋଗ କରିବା ଦ୍ୱାରା ବସ୍ତୁର ତ୍ୱରଣ 5 m/s^2 ହୁଏ । ତେବେ ପ୍ରୟୋଗ ହୋଇଥିବା ବଳର ପରିମାଣ CGS ଏକକରେ _____ ହେବ ।

A constant force acts on an object of mass 50 kg. and produces an acceleration of 5 m/s^2. Force in CGS unit will be _____ .

Q2. ଏକ ବନ୍ଧୁକରୁ 50 grams ବସ୍ତୁତ୍ୱର ଏକ ଗୁଳି 30 m/s ପରିବେଗରେ ବହାରିଯାଏ । ତେବେ ଗୁଳି ଏବଂ ବନ୍ଧୁକର ସମ୍ବେଗର ଅନୁପାତ = _____ ।

A bullet weighing 50 grams leaves the gun with a velocity of 30 m/s. The ratio of momentum of the bullet to the gun is _____ .

Q3. ଏକ ଉଚ୍ଚତାରୁ ଏକ ବସ୍ତୁ 10 m/s² ର ତ୍ୱରଣରେ ତଳକୁ ଖସିଲା । ତେବେ ଖସିବାର 5 seconds ପରେ ଏହାର ପରିବେଗ = _____ ହେବ ।

An object dropped from a cliff falls with a constant acceleration of 10 m/s² . _____ will be the speed after 5 seconds of dropped.

Q4. ଏକ ମନୁଷ୍ୟକୃତ ଉପଗ୍ରହ ଏକ ବୃତ୍ତାକାର ପଥ ଯାହାର ବ୍ୟାସାର୍ଦ୍ଧ 42250 km. ରେ ପରିକ୍ରମଣ କରେ । ଯଦି ସେ ସଂପୂର୍ଣ୍ଣ ପରିକ୍ରମଣ ପାଇଁ 24 hrs ସମୟ ନିଏ ତେବେ ଏହାର ପରିବେଗ = _____ ।

An artificial satellite is moving in a circular orbit of radius 42250 km. If it takes 24 hrs. to revolve around then its velocity will be _____.

Q5. ରାଜୁ ପୂର୍ବ ଦିଗରେ 15 minute ରେ 1 km ଚାଲିଲା ପରେ ଉତ୍ତର ଦିଗରେ 10 minutes ରେ 2 km ଅତିକ୍ରମ କରେ । ତେବେ ତା'ର ହାରାହାରି ବେଗ = _____ (m/s) ।

Raju walks 1 km towards the East in 15 minutes and then he turns north and runs 2 km in 10 minutes. _____ will be average speed of Raju in m/s.

Q6. 5 kg ବସ୍ତୁତ୍ୱର ଏକ ବନ୍ଧୁକରୁ ବାହାରିଥିବା ଏକ 25 gram ଗୁଳିର ପରିବେଗ 500 m/s ହେଲେ, ବନ୍ଧୁକର ପ୍ରତ୍ୟାଗମନ ପରିବେଗର ମୂଲ୍ୟ = _____ ।

The recoil velocity of a gun having mass equals to 5 kg will be _____ if a bullet of 25 gram acquires the velocity of 500 m/s after firing from the gun,

Q7. 150 g ର ଏକ ପଥରକୁ 2m/s ପରିବେଗ ସହ ନିକ୍ଷେପ କରାଗଲେ ଏହାର ସମ୍ବେଗର ମୂଲ୍ୟ = _____ ।

_____ will be the momentum of a stone having mass 150 g when it is thrown with a velocity of 2m/s.

Q8. ଦୁଇଟି ଇଲେକ୍ଟ୍ରନ୍ (ବସ୍ତୁତ୍ୱ 9.1×10^{-31} kg) ମଧ୍ୟରେ ଦୂରତା $10\,\mathring{A}$ । ତେବେ ସେମାନଙ୍କ ମଧ୍ୟରେ ମାଧ୍ୟାକର୍ଷଣ ବଳର ପରିମାଣ = _____ ।

Two electrons each of mass 9.1×10^{-31} kg are at a distance of $10\,\mathring{A}$. The gravitational force of attraction between them will be _____.

Q9. ଏକ ଛାତରୁ ଫିଙ୍ଗା ଯାଇଥିବା ଏକ ପଥର 0.1 second ରେ ଭୂମିଠାରୁ 2m ଉଚ୍ଚତାରେ ଥିବା ଏକ ଝରକାକୁ ଅତିକ୍ରମ କରେ । ତେବେ ଝରକା ଏବଂ ଛାତ ମଧ୍ୟରେ ଦୂରତା = _____ ।

A stone is dropped from the edge of a roof. It passes a window which is at 2m height from the ground in 0.1 second. _____ will be the distance of the window from the roof. ($g = 10m/s^2$)

Q10. 4.9 kg ବସ୍ତୁତ୍ୱର ଏକ ବସ୍ତୁ ଉପରେ 2 kg wt. ର ଏକ ବଳ ପ୍ରୟୋଗ ହେଲେ ଏହାର ତ୍ୱରଣ _____ ହେବ ।

A force of 2 kg wt. acts on a body of mass 4.9 kg then its acceleration will be _____.

Q11. ପ୍ରସିଦ୍ଧ ଭାରତୀୟ ବୈଜ୍ଞାନିକ ସାର୍ ଚନ୍ଦ୍ରଶେଖର ଭେଙ୍କଟ ରମଣଙ୍କର ଜନ୍ମ ବର୍ଷ ହେଉଛି _____ ।

The birth year of the great Indian Scientist Sir Chandrasekhar Venkata Raman is_____ .

Q12. ନିମ୍ନଲିଖିତଙ୍କ ମଧ୍ୟରୁ _____ ର ସାନ୍ଦ୍ରତା ସବୁଠାରୁ କମ୍ ।

(କ) ପାଣି (ଖ) ତେଲ (ଗ)ଉଦ୍‌ଜାନ (ଘ) କାର୍ବନ (ଙ) ଲୁଣ

Among the followings _____ has lowest density.

i. water ii. oil iii. hydrogen iv. carbon v. salt

Q13. ନିମ୍ନଲିଖିତଙ୍କ ମଧ୍ୟରୁ _____ ର ବସ୍ତୁତ୍ୱ ସବୁଠାରୁ ଅଧିକ ।

(କ) ଜଳର ଏକ ଅଣୁ (ଖ) ଖାଇବା ଲୁଣର ଏକ ଅଣୁ

(ଗ) ଅଙ୍ଗାରକାମ୍ଳର ଏକ ଅଣୁ (ଘ) ଆମୋନିଆର ଏକ ଅଣୁ

Among the followings _____ has highest mass.

i. 1 molecule of water ii. 1 molecule of common salt

iii. 1 molecule of carbon dioxide iv. 1 molecule of ammonia

Q14. ମନୁଷ୍ୟ ଏବଂ ସିମ୍ପାଜୀ ମଧ୍ୟରେ DNA ର ସାମଞ୍ଜସ୍ୟ _____ % ଥାଏ

Humans and Chimpanzees share roughly _____ % of DNA.

Q15. _____ ତାପମାତ୍ରାରେ ସେଲ୍‌ସିୟସ୍ ଏବଂ ଫାରେନାହିଟ୍ ସ୍କେଲ୍‌ରେ ପରିମାଣ ସମାନ ଥାଏ ।

At _____ temperature Celsius and Fahrenheit scale are equal.

Q16. ସୌର ଜଗତରେ ସବୁଠାରୁ ବୃହତ୍ ଗ୍ରହର ନାମ _____ ।

_____ is the biggest planet in solar system.

Q17. ଏକ ଅକ୍ଟୋପସ୍‌ର _____ ଟି ମସ୍ତିଷ୍କ ଥାଏ ।

An Octopus has _____ number of brains.

Q18. ମହାକାଶରେ ପ୍ରବେଶ କରିଥିବା ପ୍ରଥମ ମନୁଷ୍ୟକୃତ ଉପଗ୍ରହର ନାମ_____ ।

_____ was the name of the first artificial satellite to enter space.

Q19. ବିଜୁଳିର ତାପମାତ୍ରା ସୂର୍ଯ୍ୟ ପୃଷ୍ଠର ତାପମାତ୍ରା ଠାରୁ ମଧ୍ୟ ଅଧିକ । (ସତ୍ୟ / ମିଥ୍ୟା)

ଉତ୍ତର : _____

Lightening is hotter than the surface of sun. (True or False)

Ans. _____

Q20. ଏକ ଆୟନ ଯାହା ଏକ ପ୍ରୋଟନ୍ ସହ ସମାନ ଅଟେ । ଏହାର ନାମ _____ ।

An ion that is considered as a proton is _____ .

Q21. ମାଇଟୋକଣ୍ଡ୍ରିଆ ଭିତରେ ଥିବା ତରଳ ରସାୟନ ପଦାର୍ଥଟି _____ ।

The liquid inside the mitochondria is called _____ .

Q22. କୋଷରେ ଥିବା _____ ଅଙ୍ଗିକା କୋଷଝିଲ୍ଲୀ ସଂଗଠନରେ ସାହାର୍ଯ୍ୟ କରିଥାଏ ।

The _____ helps for membrane biogenesis.

Q23. କୋଷରେ ଥିବା _____ କୋଷଅଙ୍ଗିକା ହଜମକାରୀ ଏନଜାଇମ୍‌ରେ ଭରପୂର ଅଟେ ।

The _____ organelle of cell is rich in digestive enzyme.

Q24. ରାଇବୋଜ୍‌ମକୁ କୋଷର _____ କୁହାଯାଏ ।

Ribosomes are called _____ of cell.

Q25. ଉଦ୍ଭିଦ ଏବଂ ବୀଜାଣୁ କୋଷରେ ଥିବା ସାଧାରଣ ଅଙ୍ଗିକାର ନାମ _____ ।

The common organelle found in plant and bacteria cell is called _____ .

Q26. ଜାଇଲେମ୍ ଟିସୁର _____ କୋଷଟି ଜୀବନ୍ତ ଅଟେ ।

The _____ cell of xylem tissue is living.

Q27. ନଡ଼ିଆ ଉପରେ ଥିବା ଶକ୍ତ ଆବରଣ _____ ଟିସୁ ଦ୍ୱାରା ହୋଇଥାଏ ।

The _____ tissue makes the husk of coconut.

Q28. ମସୁର ଡ଼ାଲିରେ _____ ପୋଷଣ ପ୍ରଚୁର ପରିମାଣରେ ଥାଏ ।

The lentils are rich in _____ nutrient.

Q29. ଧାଡ଼ି ଏବଂ ସ୍ତମ୍ଭ ତିଆରି କରି ଚାଷ କରାଯାଉଥିବା ଫସଲକୁ _____ କହନ୍ତି ।

The crops which are cultivated by making rows and columns are called _____ .

Q30. ଭାରତୀୟ ପ୍ରଜାତିର ଗାଈଙ୍କୁ _____ ମଧ୍ୟ କୁହାଯାଏ ।

The Indian breeds of cattles are also called as _____ .

Q31. ଉଦ୍ଭିଦ ଗୁଡ଼ିକର ଖାଦ୍ୟ ପରିଚାଳନାରେ ସାହାର୍ଯ୍ୟ କରୁଥିବା ଟିସୁକୁ _____ କୁହାଯାଏ ।

The tissue that helps for the conduction of food in plants are called _____ .

Q32. _____ଏବଂ _____ପାଇଁ ମହୁମାଛି ଚାଷ କରାଯାଏ ।

Honey bee are cultivated for their _____ and _____ .

Q33. _____ ଏକ ଖରିଫ ଫସଲର ଏକ ଉଦାହରଣ ।

_____ is an example of kharif crop.

Q34. _____ ମେସିନ୍ ଫସଲ ଅମଳ ପାଇଁ ବ୍ୟବହୃତ ହୁଏ ।

The _____ machine is used for harvesting of crops.

Q35. ଏନ୍. ପି. କେ (N. P. K) ହେଉଛି _____ ର ଏକ ଉଦାହରଣ ।

NPK is an example of _____ .

Q36. ପାରେନ୍‌କାଇମା ଟିସୁ ମଧ୍ୟରେ ଥିବା ବାୟୁ ରନ୍ଧ୍ରକୁ _____ କହନ୍ତି ।

The parenchyma tissue having air spaces inside it are called as _____ .

Q37. _____ କୁ ରଙ୍ଗୀନ ପ୍ଲାଷ୍ଟିଡ଼ କହନ୍ତି ।

The _____ is called as the colourful plastid.

Q38. DNA ର କାର୍ଯ୍ୟକ୍ଷମ ଏକକକୁ _____ କହନ୍ତି ।

The functional unit of DNA is called _____ .

Q39. _____ ଗଛର ବେର, କାଣ୍ଡ ଓ ପତ୍ର ନଥାଏ ।

The plants having no root, stem and leaves are called _____ .

Q40. ଫ୍ଲୋଏମ ଟିସୁର _____ କୋଷ ମୃତ ଅଟେ ।

The _____ cell of phloem tissue is dead.

MATHEMATICS

Q1. ଯଦି If $\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{8}} = a + b\sqrt{6}$, ତେବେ (a, b) = _____ .

If $\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{8}} = a + b\sqrt{6}$, then (a, b) = _____ .

Q2. ଯଦି $a = xy^{p-1}$, $b = xy^{q-1}$, $c = xy^{r-1}$, ତେବେ $a^{q-r} b^{r-p} c^{p-q}$ ମୂଲ୍ୟ = _____ .

If $a = xy^{p-1}$, $b = xy^{q-1}$, $c = xy^{r-1}$, then the value of $a^{q-r} b^{r-p} c^{p-q}$ = _____ .

Q3. ସମାଧାନ କରି x ର ମୂଲ୍ୟ ନିରୂପଣ କର । $2^{2x} - 2^{x+3} + 2^4 = 0$, x = _____ .

Solve and find x. $2^{2x} - 2^{x+3} + 2^4 = 0$, x = _____ .

Q4. $\left(\frac{x^a}{x^b}\right)^c \times \left(\frac{x^b}{x^c}\right)^a \times \left(\frac{x^c}{x^a}\right)^b$ = _____ .

$\left(\frac{x^a}{x^b}\right)^c \times \left(\frac{x^b}{x^c}\right)^a \times \left(\frac{x^c}{x^a}\right)^b$ = _____ .

Q5. ଯଦି $49392 = a^4b^2c^3$ ତା ହେଲେ a+b+c= _____ ଯେଉଁଠି a, b, c ମାନେ ଅଲଗା ଅଲଗା ମୌଳିକ ସଂଖ୍ୟା ।

If $49392 = a^4b^2c^3$ then a+b+c= _____ where a, b, c are different prime numbers.

Q6. ଯଦି $25^{x-1} = 5^{2x-1} - 100$, ତେବେ x = _____ .

If $25^{x-1} = 5^{2x-1} - 100$, then x = _____ .

Q7. ଯଦି $\left(\frac{x^{-1}y^2}{x^3y^{-2}}\right)^{\frac{1}{3}} \div \left(\frac{x^6y^{-3}}{x^{-2}y^3}\right)^{\frac{1}{2}} = x^a y^b$ ତେବେ a + b = _____ .

If $\left(\frac{x^{-1}y^2}{x^3y^{-2}}\right)^{\frac{1}{3}} \div \left(\frac{x^6y^{-3}}{x^{-2}y^3}\right)^{\frac{1}{2}} = x^a y^b$ then a + b = _____ .

Q8. ଯଦି $x = \sqrt[3]{28}$, $y = \sqrt[3]{27}$, ତେବେ $x + y - \frac{1}{x^2 + xy + y^2}$ = _____ .

If $x = \sqrt[3]{28}$, $y = \sqrt[3]{27}$, then the value of $x + y - \frac{1}{x^2 + xy + y^2}$ = _____ .

Q9. $\left\{\left(\frac{a}{b}\right)^{\sqrt{99}-\sqrt{97}}\right\}^{\sqrt{99}+\sqrt{97}}$ = _____ .

Q10. ଯଦି $\sqrt{3-2\sqrt{2}} = a-1$ ତେବେ a = _____ .

If $\sqrt{3-2\sqrt{2}} = a-1$, then a = _____ .

Q11. $(x-y)^3+(y-z)^3+(z-x)^3$ ଏବଂ $(x-y)^3-(z-y)^3-(x-z)^3$ ର ଲ.ସା.ଗୁ = _____ .

The LCM of $(x-y)^3+(y-z)^3+(z-x)^3$ and $(x-y)^3-(z-y)^3-(x-z)^3$ = _____ .

Q12. ଉତ୍ପାଦୀକରଣ : - $\left(x^2+\frac{1}{x^2}\right)-4\left(x+\frac{1}{x}\right)+6$ = _____.

Factorise :- $\left(x^2+\frac{1}{x^2}\right)-4\left(x+\frac{1}{x}\right)+6$ = _____.

Q13. ଯଦି $(x+2)\left(x^2+25\right)-10x^2-20x=(x+2)A$ ତେବେ A = _____ .

If $(x+2)\left(x^2+25\right)-10x^2-20x=(x+2)A$ then A = _____ .

Q14. ସମାଧାନ କର - $\frac{0.87\times0.87\times0.87+0.13\times0.13\times0.13}{0.87\times0.87-0.87\times0.13+0.13\times0.13}$ = _____ .

Solve : $\frac{0.87\times0.87\times0.87+0.13\times0.13\times0.13}{0.87\times0.87-0.87\times0.13+0.13\times0.13}$ = _____ .

Q15. ଯଦି a, b, c କେହି ବି ଶୂନ ନୁହନ୍ତି ଏବଂ a+b+c=0 ତେବେ $\frac{a^2}{bc}+\frac{b^2}{ca}+\frac{c^2}{ab}$ = _____ .

If a, b, c are all non zero and a+b+c=0, then the value of $\frac{a^2}{bc}+\frac{b^2}{ca}+\frac{c^2}{ab}$ = _____ .

Q16. ଯଦି $\frac{1}{a}+\frac{1}{b}+\frac{1}{c}=1$ ଏବଂ abc = 2 ତେବେ $ab^2c^2+a^2bc^2+a^2b^2c$ = _____ .

If $\frac{1}{a}+\frac{1}{b}+\frac{1}{c}=1$ and abc = 2 then $ab^2c^2+a^2bc^2+a^2b^2c$ = _____ .

Q17. ଏକ ସରଳ ରେଖା ଯାହାକି x ଅକ୍ଷ ସହ ସମାନ୍ତର ଏବଂ (4, 2) ବିନ୍ଦୁ ମଧ୍ୟରେ ଗତି କରେ, ତା' ର ସମୀକରଣ _____.

The equation of the line parallel to x – axis and passing through (4, 2) is _____ .

Q18. ଏକ ତ୍ରିଭୁଜ ଯାହାକି x ଏବଂ y ଅକ୍ଷ ଏବଂ ସେହି ସରଳରେଖା ଦ୍ୱାରା ଆବଦ୍ଧ ହୋଇଥାଏ, ଯେଉଁ ସରଳରେଖା x ଏବଂ y ଅକ୍ଷକୁ ଯଥାକ୍ରମେ ୨ ଏବଂ ୪ ଏକକ ଦୂରତାରେ ଛେଦନ କରେ, ସେହି ତ୍ରିଭୁଜର କ୍ଷେତ୍ରଫଳ = _____ .

The area of the triangle formed by the cartesian axes and the line that cuts x and y axis at distance 2 and 4 units respectively is _____ sq. unit.

Q19. ଯେଉଁ ବିନ୍ଦୁରେ $-x+2y-1=0$, y - ଅକ୍ଷକୁ ଛେଦନ କରେ, ସେହି ବିନ୍ଦୁର ସ୍ଥାନାଙ୍କ = _____ .

The point at which $-x+2y-1=0$ cuts the y – axis is = _____ .

Q20. ଏକ ବୃତ୍ତର ପରିଧି ଏବଂ _____ ର ଅନୁପାତକୁ π କୁହାଯାଏ ।

π is defined as the ratio between the circumference of a circle and _____ .

Q21. ଯଦି ଏକ କୋଣର ଅନୁପପୂରକ କୋଣ ସେହି କୋଣର ତିନିଗୁଣର ପରିପୂରକ କୋଣ ସହ ସମାନ, ତେବେ ସେହି କୋଣର ପରିମାଣ = _____ .

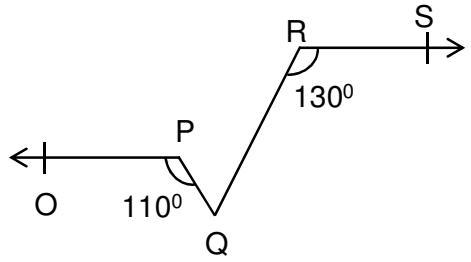
If the complement of an angle is equal to the supplement of the thrice of it, then the value of the angle = _____ .

Q22. ଯଦି ଏକ କୋଣ x^0 ଏହାର ଅନୁପୂରକ କୋଣ ସହ ସମାନ ଅଟେ ଏବଂ ଏକ କୋଣ y^0 ଏହାର ପରିପୂରକ କୋଣ ସହ ସମାନ, ତେବେ $\frac{x^0}{y^0}$ = _____ .

If x^0 is an angle which is equal to its complement and y^0 is the angle which is equal to its supplement then $\frac{x^0}{y^0}$ = _____ .

Q23. ଦତ୍ତ ଚିତ୍ରରେ $OP \| RS$, $\angle OPQ = 110^0$ ଏବଂ $\angle QRS = 130^0$, ତେବେ $\angle PQR$ = _____ .

In the figure $OP \| RS$, $\angle OPQ = 110^0$ and $\angle QRS = 130^0$, then $\angle PQR$ = _____ .



Q24. ΔABCରେ $\angle A > \angle B > \angle C$ ଏବଂ $\angle A$, $\angle B$, $\angle C$ ର ମୂଲ୍ୟ ପୂର୍ଣ୍ଣ ସଂଖ୍ୟା ଅଟେ । ତେବେ $(\angle A, \angle B, \angle C)$ ର ସର୍ବନିମ୍ନ ମୂଲ୍ୟ ତ୍ରୟ = (_____ , _____, _____).

In ΔABC, $\angle A > \angle B > \angle C$ and the measure of $\angle A$, $\angle B$, $\angle C$ are in degrees and in integers, then the least possible values of $(\angle A, \angle B, \angle C)$ = (_____ , _____, _____).

Q25. ΔABCର $\angle B$ ଏବଂ $\angle C$ ର ଅନ୍ତଃକୋଣର ସମଦ୍ୱିଖଣ୍ଡକ O ରେ ଛେଦ କରନ୍ତି । ଯଦି $\angle B + \angle C = 100^0$ ତେବେ $\angle BOC$ = _____ .

Internal bisectors of $\angle B$ and $\angle C$ of ΔABC meet at O. If $\angle B + \angle C = 100^0$ then $\angle BOC$ = _____ .

Q26. AB ରେଖାଖଣ୍ଡର ମଧ୍ୟବିନ୍ଦୁ D ଅଟେ । AB ର ଏକ ବହିଃସ୍ଥ ବିନ୍ଦୁ P, A ଏବଂ B ଠାରୁ ସମଦୂରବର୍ତ୍ତୀ ବିନ୍ଦୁ ଅଟେ । ତେବେ $\angle ADP$ = _____ .

AB is a line segment. D is the midpoint. P is a point lies outside of AB such that P is equidistant from A and B then the value of $\angle ADP$ = _____ .

Q27. ଏକ ସମବାହୁ ତ୍ରିଭୁଜର ପ୍ରତ୍ୟେକ ବହିଃସ୍ଥ କୋଣର ପରିମାଣ = _____ .

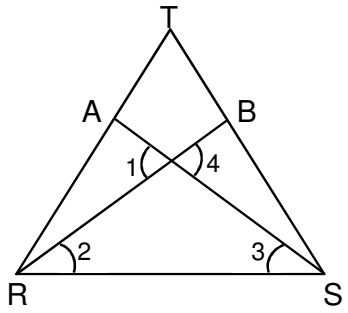
The measure of each exterior angels of an equilateral triangle = _____ .

Q28. ଏକ ସମବାହୁ ତ୍ରିଭୁଜର ଗୋଟିଏ ବାହୁର ଭରକେନ୍ଦ୍ର ଠାରୁ ସର୍ବନିମ୍ନ ଦୂରତା ୮ ସେ.ମି. । ତେବେ ସେହି ତ୍ରିଭୁଜର ଏକ ଅନ୍ତଃକୋଣ ସମଦ୍ୱିଖଣ୍ଡକର ଦୈର୍ଘ୍ୟ = _____ .

The minimum distance of one side of an equilateral triangle from the centroid is 8 cm, then the length of the internal angle bisector of that triangle = _____ cm.

Q29. ଦଉ। ଚିତ୍ରରେ RT=TS. $\angle 1 = 2\angle 2$ ଏବଂ $\angle 4 = 2\angle 3$, ଯଦି $\angle TRB = 30^0$, $\angle T = 70^0$, ତେବେ $\angle TAS$=_____ .

In the given figure RT=TS. $\angle 1 = 2\angle 2$ and $\angle 4 = 2\angle 3$, if $\angle TRB = 30^0$, $\angle T = 70^0$, then $\angle TAS$ =_____ .



Q30. ΔABC ରେ $\angle B = 2\angle C$, D BC ଉପରିସ୍ଥ ଏକ ବିନ୍ଦୁ । AD, $\angle BAC$ କୁ ସମଦ୍ୱିଖଣ୍ଡ କରେ । AB = CD, ତେବେ $\angle BAC$= _____ .

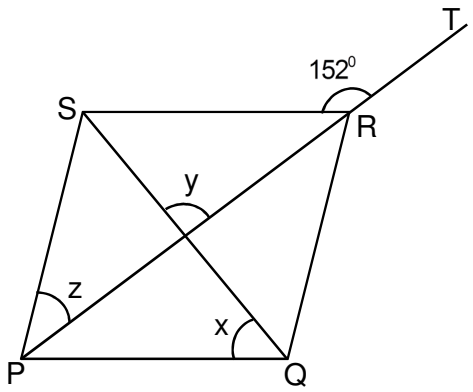
In ΔABC , $\angle B = 2\angle C$, D is a point on BC such that AD bisects $\angle BAC$and AB = CD, then $\angle BAC$= _____ .

Q31. ଏକ ତ୍ରିଭୁଜର ଦୁଇଟି ବାହୁର ଦୈର୍ଘ୍ୟ ଯଥାକ୍ରମେ ୫ ସେ.ମି. ଏବଂ ୧.୫ ସେ.ମି. । ତେବେ ତୃତୀୟ ବାହୁର ଦୈର୍ଘ୍ୟ _____ ସେ.ମି. ରୁ _____ ସେ.ମି. ମଧ୍ୟରେ ରହିବ ।

Two sides of a triangle are of lengths 5 cm and 1.5 cm. The length of the third side of the triangle lies between _____ cm and _____ cm.

Q32. ଦଉଚିତ୍ରରେ PQRS ଏକ ରମ୍ବସ୍ । କର୍ଣ୍ଣ PR କୁ ବର୍ଦ୍ଧିତ କରାଯାଇଛି ଏବଂ ଏହା ଉପରିସ୍ଥ T ଏକ ବିନ୍ଦୁ । $\angle SRT = 152^0$ ତେବେ $x+y-z$= _____ .

In the figure PQRS is a rhombus in which the diagonals PR is produced to T. If $\angle SRT = 152^0$, find $x+y-z$= _____ .



Q33. ଏକ ଚତୁର୍ଭୁଜ ABCD ର $\angle A$ ଏବଂ $\angle B$ ର ଅନ୍ତଃ ସମଦ୍ୱିଖଣ୍ଡକ O ବିନ୍ଦୁରେ ଛେଦ କରନ୍ତି । $\angle C + \angle D = K \ \angle AOB$ ତେବେ K = _____ .

If the internal bisectors of two adjacent angles A and B of a quadrilateral ABCD intersect at point O such that $\angle C + \angle D = K \ \angle AOB$, then K = _____ .

Q34. $0.6 + 0.\overline{7} + 0.4\overline{7}$ = _____ .

Q35. $\frac{1}{1+x^{a-b}} + \frac{1}{1+x^{b-a}}$ = _____ .

Q36. $\frac{(25)^{\frac{3}{2}} \times (243)^{\frac{3}{5}}}{(16)^{\frac{5}{4}} \times (8)^{\frac{4}{3}}}$ = _____

Q37. ଯଦି $2^x = 3^y = 6^{-z}$ ତେବେ $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$ = _____ .

If $2^x = 3^y = 6^{-z}$, then $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$ = _____ .

Q38. ଯଦି $\left(\sqrt{3} + \sqrt{7}\right)^2 = a + 2\sqrt{21}$ ତେବେ a = _____ .

If $\left(\sqrt{3} + \sqrt{7}\right)^2 = a + 2\sqrt{21}$, then a = _____ .

Q39. ଯଦି $\frac{a}{b} + \frac{b}{a} = 2$ ତେବେ $\left(\frac{a}{b}\right)^{100} - \left(\frac{b}{a}\right)^{100}$ = _____ .

If $\frac{a}{b} + \frac{b}{a} = 2$, then $\left(\frac{a}{b}\right)^{100} - \left(\frac{b}{a}\right)^{100}$ = _____ .

Q40. ଯଦି $a^2 + b^2 + c^2 = 24$, ab + bc + ca = - 4 ତେବେ a + b + c = _____ .

If $a^2 + b^2 + c^2 = 24$, ab + bc + ca = - 4, then a + b + c = _____ .

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