WvP-evsjv e¨vsK - c_g Av‡jv MwYZ Drme 2010

ময়মনসিংহ আঞ্চলিক গণিত অলিম্পিয়াড

Av‡qvRK: evsjv‡`k MwYZ Awj¤úqvW KwgwU

ক্যাটাগরি: প্রাইমারি (৩য়-৫ম শ্রেণী) **সময়: ১ ঘন্টা ১৫ মিনিট**

নাম(বাংলায়): **শ্রেণী(২০০৯ সাল):**

Name (In English): **Registration No:**

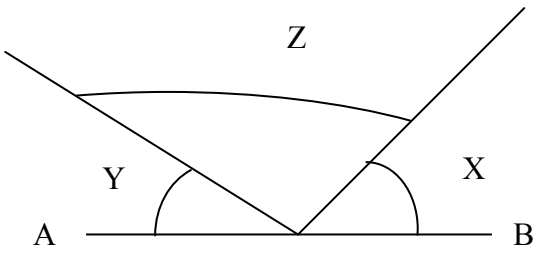
[এই উত্তরপত্রের নির্দিষ্ট স্থানে উত্তর লিখতে হবে। খসড়ার জন্য পৃথক কাগজ ব্যবহার করতে হবে এবং তা জমা দিতে হবে। সকল সংখ্যা ইংরেজীতে লেখা হয়েছে। সবাইকে নিজ নিজ উত্তরপত্র জমা দিতে হবে।]

ck	DËi
hw` *a* Ges *b* DfqB we‡Rvo msL¨v nq wb‡Pi †KvbwU Aek¨B we‡Rvo n‡e? If *a* and *b* are both odd numbers, which of the following must be an odd integer? *i)* $(a + b)^2 - 5$ *ii)* $a^2 + b^2$ *iii)* $(a + 1)^2 - (b + 1)^2$ *iv)* $(a - b + 1) - 9$ *v)* $(a + 1) \times (b + 1) - 2$	*i)* $(a + b)^2 - 5$
GKwU ev‡· 2 †_‡K 49 chšÍ 4 Gi ¸wYZK (4 Øviv wefvR¨) msL¨v¸‡jv ivLv nj| ev‡· †gvU KqwU msL¨v Av‡Q Ges ev‡· _vKv msL¨v¸‡jvi †hvMdj KZ? There are all the multiples of 4 from 2 to 49 in a box. How many numbers are there in the box? What is the summation of all numbers which are in the box?	12, 312
30wU ev‡·i cwZ ZZxq ev‡· GKwU dj, cwZ cÂg ev‡· GKwU PK‡jU Ges cwZ `kg ev‡· GKwU eB ivLv Av‡Q| Ggb KZ¸‡jv ev· Av‡Q †h¸‡jv‡Z eB Ges GKwU dj Av‡Q wKš †Kvb PK‡jU †bB? Each third box contains a flower, each fifth box contains a candy and each tenth box contains a book. In a row of 30 boxes, how many boxes do contain a book and a flower and no candy?	0
Qvi‡cvKv R‡bwi ciw`b †_‡KB cwZw`b GKwU K‡i ev”Pv †`lqv ïi K‡i| Qvi‡cvKv M‡elK wg: cvYb 27 ‡deqwi GKwU ev‡· m`¨ Rbv †blqv GKwU Qvi‡cvKv †i‡L w`‡jb| 2 gvP †k‡l H ev‡· 16 wU Qvi‡cvKv _vK‡j 3 gvP †k‡l H ev‡· KqwU Qvi‡cvKv _vK‡e? [eQiwU 2005 †_‡K 2010 Gi g‡a¨] A bug starts breeding on the very next day of its birth. On 27th February bug researcher Mr. Pranon kept a new born bug in a box. The number of bugs in that box after 2nd March is 16. What is the number of bugs in that box after 3rd march? [The year is between 2005 and 2010]	32
x, y, z wfb wfb ‡gŠwjK msL¨v †hLv‡b $x - y = z$ Ges $x < y < z$| *x* Gi gvb mewbg KZ n‡Z cv‡i? If *x, y, z* are three different prime numbers satisfying $x - y = z$ and $x < y < z$, then what is minimum value of *x*?	5

WvP-evsjv e¨vsK - c_g Av‡jv MÖYZ Drme 2010

ময়মনসিংহ আঞ্চলিক গণিত অলিম্পিয়াড

Av‡qvRK: evsjv‡`k MÖYZ Aÿwú¤úqvW KwgwU

ck	DËi
GKwU ev‡· QqwU msL¨v Av‡Q| G‡`i †h‡Kvb GKwU Ab¨ cvPwUi M‡oi mgvb| (i) GKwU msL¨v 3 n‡j Ab¨ cvPwUi †hvMdj KZ? (ii) msL¨v¸‡jv wjL| A box contains six numbers. Any one of them is the average of the rest five. (i) If one number is 3, what is the sum of the rest five numbers? (ii) What are those six numbers?	(i) 15 (ii) 3,3,3,3,3,3
26 gvP evsjv‡`‡ki ¯vaxbZv w`em| 26/03/1971 Zwi‡L evsjv‡`‡ki ¯vaxbZv †NwlZ nq| 26, 03 Ges 2010 Gi ¸Yd‡ji ‡gvŠwjK Drcv`K¸‡jv wbYq Ki| 26th March is the Independence Day of Bangladesh. Independence of Bangladesh was declared on 26/03/1971. Find out all the prime factors of the product of 26, 03 and 2010.	2, 3, 5, 13, 67
(2×2×2×2×2×2×2×2) - (4×4×4×4) + (4×4×4×4) - (16×16) =?	0
 $\angle Z = 90^0$ Ges $\angle X = 2\angle Y$ n‡j $\angle Y$ Gi cwigvc KZ? $\angle Z = 90^0$and $\angle X = 2\angle Y$. Then find the value of the $\angle Y$.	30^0
GKwU N‡i 6 Rb AwZw_ e‡m Av‡Q| G‡`i c‡Z¨‡K nq imgvjvB cQ›` K‡i, bv nq ivR‡fvM cQ›` K‡i| Z‡e AšÍZ GKRb imgvjvB cQ›` K‡i| hw` †h‡Kvb `BR‡bi AšÍZ GKRb ivR‡fvM cQ›` K‡i Zvn‡j AwZw_‡`i †gvU KZRb ivR‡fvM cQ›` K‡i? 4 visitors are sitting in a room. Each one likes *ROSMALAI* or *RAJVOG*. At least one likes *ROSMALAI*. Given that between any two students at least one likes *RAJVOG*. How many visitors like *RAJVOG*?	5
cvPwU wiKkv cwZ N›Uvq h_vµ‡g $\frac{20}{30}, \frac{10}{20}, \frac{40}{60}, \frac{55}{50}, \frac{50}{60}$ gvBj P‡j| me‡P‡q দ্রুZMvgx wiKkvi ‡eM Ges me‡P‡q aviMvgx wiKkvi ‡e‡Mi †hvMdj KZ? Five rickshaws run at a speed of $\frac{20}{30}, \frac{10}{20}, \frac{40}{60}, \frac{55}{50}, \frac{50}{60}$ miles per hour respectively. Find the sum of the speed of the fastest rickshaw and the slowest rickshaw.	$\frac{8}{5}$
MÖYZ Aÿwú¤úqv‡W gfv‡mi GKwU `j‡K mgvb m`m¨ wewkó 8 wU `‡j fvM Kiv hvq, Avevi mgvb m`m¨ wewkó 12 wU `‡j I fvM Kiv hvq| H `‡ji gfvm‡`i 6 m`‡m¨i mewbg KZ¸‡jv `‡j fvM Kiv hv‡e? A group of MOVers can be divided into 8 teams with an equal number of MOVers in each team or into 12 teams with an equal number of MOVers in each team. What is the minimum number of groups that can be formed with each group having 6 MOVers?	4

WvP-evsjv e¨vsK - c_g Av‡jv MwYZ Drme 2010

ময়মনসিংহ আঞ্চলিক গণিত অলিম্পিয়াড

Av‡qvRK: evsjv‡`k MwYZ Awj¤úqvW KwgwU

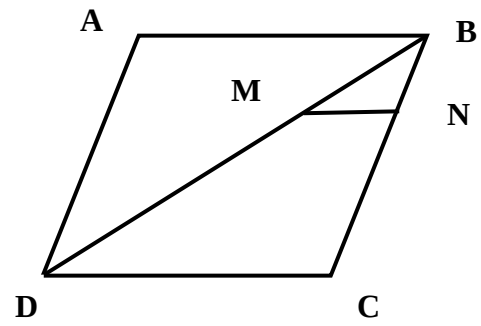
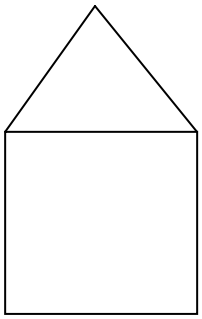
ক্যাটাগরি: জুনিয়র (৬ষ্ঠ-৮ম শ্রেণী) **সময়: ১ ঘন্টা ১৫ মিনিট**

নাম(বাংলায়): **শ্রেণী(২০০৯ সাল):**

Name (In English): **Registration No:**

[এই উত্তরপত্রের নির্দিষ্ট স্থানে উত্তর লিখতে হবে। খসড়ার জন্য পৃথক কাগজ ব্যবহার করতে হবে এবং তা জমা দিতে হবে। সকল সংখ্যা ইংরেজীতে লেখা হয়েছে। সবাইকে নিজ নিজ উত্তরপত্র জমা দিতে হবে।]

ck	DËi
MwYZ Awj¤úqv‡W gfv‡mi GKwU `j‡K mgvb m`m¨ we‡kó 8 wU `‡j fvM Kiv hvq, Avevi mgvb m`m¨ we‡kó 12 wU `‡jI fvM Kiv hvq| H `‡ji gfvm‡`i 2 m`‡m¨i mewbg KZ¸‡jv `‡j fvM Kiv hv‡e? A group of MOVers can be divided into 8 teams with an equal number of MOVers in each team or into 12 teams with an equal number of MOVers in each team. What is the minimum number of groups that can be formed with each group having 2 MOVers?	12
Pvi A‡¼i †h KqwU msL¨v Av‡Q hv‡`i †_‡K 12 we‡qvM Ki‡j Zv 12 w`‡q, 13 we‡qvM Ki‡j Zv 13 w`‡q Ges 19 we‡qvM Ki‡j Zv 19 w`‡q fvM hvq †m msL¨v¸wj wbYq Ki| Find all the 4-digit numbers which are divisible by 12, 13 and 19 if 12, 13 and 19 are subtracted from the numbers respectively.	2964, 5928, 8892
Wvg X Gi A‡aK †Zj w`‡q cY| Wvg Y Gi g‡a¨ X Gi wØ¸Y †Zj a‡i Ges eZgv‡b †mwUi `B ZZxqvsk †Zj w`‡q cY| X Gi me †Zj Y G †X‡j w`‡j Gi KZ Ask AcY _vK‡e? Drum X is half full of oil and drum Y, which has twice the capacity of drum X, is two third full of oil. If all of the oil in drum X is poured into drum, then drum Y will be unfilled to what fraction of its capacity?	$^{1}/_{12}$
AfxK, m`xß I dimv` AÜKvi iv‡Z GKwU †mZ cvi n‡e| †mZ cvi n‡Z Zv‡`i h_vµ‡g 3π, 5π I 8π wgwbU mgq jv‡M| Zv‡`i nv‡Z †h UPjvBUwU Av‡Q †mwUi Av‡jv‡Z eo‡Rvo `BRb GKmv‡_ †mZ cvi n‡Z cv‡i| wZbR‡bi †mZwU cvi n‡Z mewbg KZ mgq jvM‡e? Avik, Sudipta and Forshad will cross a bridge in the night. They need 3π, 5π and 8π minutes respectively to cross the bridge. They have only one torch light. It is possible only for 2 persons to cross together with that torchlight. Find the smallest possible time needed for these 3 persons to cross the bridge.	16π = 50.27
4 U 7 1 6 2 +N 2 3 ..... M 2 3 2 hw` U, M Ges N wfb wfb AsK wb‡`k K‡i Zvn‡j Gi gvb wbYq Ki| If U, M and N represent single digits in the correctly worked computation above what is the value of M, N and U?	U=4 N= 6 M =1
Ggb †gŠwjK msL¨v N wbYq Ki †hb 17N+3 GKwU †gŠwjK msL¨v nq| Find the prime number N for which 17N+3 is prime?	2

ck	DËi
1 †_‡K 150 Gi g‡a¨ ‡gvU KZwU msL¨v Av‡Q hviv 15 Gi ¸wYZK wKš‘ 5 Gi ¸wYZK bq? What is the total number of the numbers from 1 to 150 which are divisible by 15 but not by 5?	0
 ABCD GKwU mvgvš‘ivwK Ges DC I MN ci¯úi mgvš‘ivj| BN= $\frac{1}{3}$ BC| Δ BNM I □ ABCD Gi ক্ষেত্রফলের AbcvZ KZ? ABCD is a parallelogram and MN is parallel to to DC. The length of BN is 1/3 of the length of BC. What is the ratio of the area of triangle BNM to the area of the parallelogram ABCD?	$\frac{1}{18}$
 The area of the square is $49m^2$ and all three angles of the triangle are p^0. Find the perimeter of the pentagon? eMwUi ক্ষেত্রফল 49 eMwgUvi| wÎfRwUi cwZwU †Kv‡Yi cwigvc p^0 n‡j cÂfRwUi cwimxgv KZ n‡e?	35
hw` *a* Ges *b* DfqB we‡Rvo msL¨v nq wb‡Pi †KvbwU Aek¨B we‡Rvo n‡e? If *a* and *b* are both odd numbers, which of the following must be an odd integer? *i)* $(a + b)^2$ *ii)* $a^2 + b^2$ *iii)* $(a + 1)^2 - (b + 1)^2$ *iv)* $(a - b + 1)-8$ *v)* $(a + 1) \times (b + 1) -4$	*iv)* $(a - b + 1)-8$
n hw` 1 †_‡K 12 chš‘ msL¨v¸‡jvi ¸Ydj nq, Zvn‡j n Gi †gvU KZ¸‡jv †gŠwjK Drcv`K Av‡Q? If n is the product of the integers from 1 to 12, inclusive, how many prime factors greater than 1 does n have?	5
¸ej cwZw`b UvKvi ev‡· Av‡Mi `B w`‡bi mgvb cwigvb UvKv Rgv K‡i| c_g `B w`b ¸ej 1 UvKv K‡i ev‡· ‡i‡LwQj| Aóg w`b †k‡l ¸eji ev‡· †gvU KZ UvKv Rgv nj? ¸ej cwZw`b M‡o KZ UvKv K‡i Rgvj? Everyday Gublu saves money in her money bank. Every day he saves as much as he saved in last two days. Gublu saved taka 1 on first two days. What will be the total amount of money in his bank after eight days? What is the average amount of money that he saved every day?	54; $^{54}/_{8}$=6.75

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ময়মনসিংহ আঞ্চলিক গণিত অলিম্পিয়াড

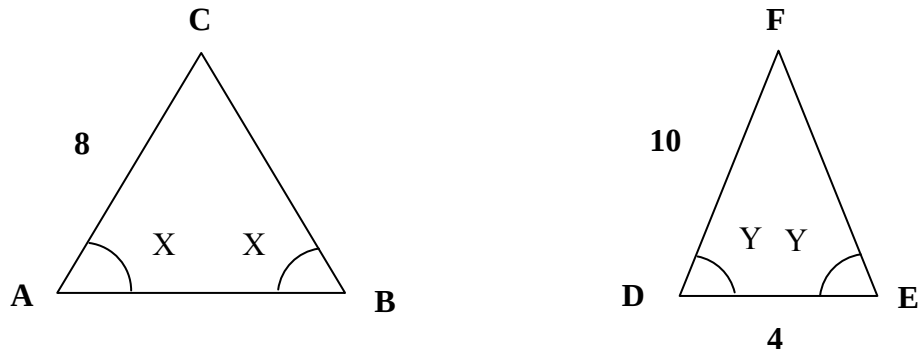
Av‡qvRK: evsjv‡`k MwYZ Awj¤úqvW KwgwU

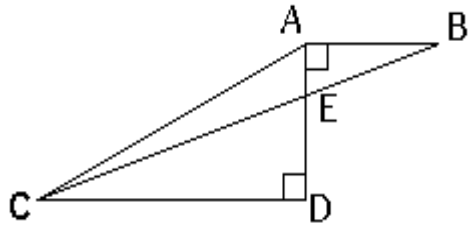
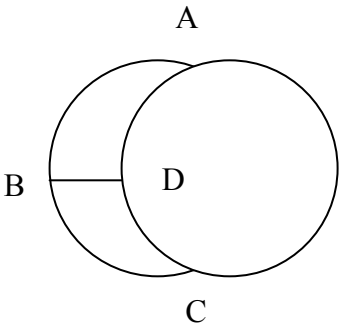
ক্যাটাগরি: সেকেন্ডারি(৯ম-১০ম শ্রেণী) **সময়: ১ ঘন্টা ১৫ মিনিট**

নাম(বাংলায়) **শ্রেণী(২০০৯ সাল):**

Name (In English): **Registration No:**

[এই উত্তরপত্রের নির্দিষ্ট স্থানে উত্তর লিখতে হবে। খসড়ার জন্য পৃথক কাগজ ব্যবহার করতে হবে এবং তা জমা দিতে হবে। সকল সংখ্যা ইংরেজীতে লেখা হয়েছে। সবাইকে নিজ নিজ উত্তরপত্র জমা দিতে হবে।]

ck	DËi
θ Ggb GKwU Acv‡iUi †hb a θ b$=\frac{a-b}{a+b}$ Ges a ≠ -b	hw` a ≠ -c Ges a θ c = 0 nq Zvn‡j c =? An operation θ is defined by the equation a θ b$=\frac{a-b}{a+b}$ for all numbers a and b such that a ≠ -b. If a ≠ -c and a θ c = 0 then c =?	a
X †mUwU‡Z 20wU ev¯Íe msL¨v i‡q‡Q| cvYb Zvi Ajm mg‡q GKwU †mU Y evbv‡jv hvi cwZwU Dcv`vb nj †m‡Ui cwZwU Dcv`v‡bi †hvMvZ¥K weicxZ (2 Gi †hvMvZ¥K weicxZ nj -2)| Gici †m X Avi Y †mU `wUi me¸‡jv msL¨v‡K †hvM K‡i w`j| †hvMdj KZ? X set contains 20 real numbers. Pranon, in his idle time, created a set Y that contains the additive inverses of the numbers of set X (additive inverse of 2 is -2). Then he added all the elements of set X and Y. What is the sum?	0
12ab GKwU Pvi A¼ wewkó msL¨v †hLv‡b b Ges a h_vµ‡g GKK I `kK ¯vbxq A¼ wb‡`k K‡i| 12ab msL¨vwU 2, 5 G Ges 7 Øviv wefvR¨ n‡j a Ges b Gi gvb wbYq Ki| In the four digit number 12ab, a and b are digits. Find a and b such that the number 12ab is divisible by 2, 5 and 7.	6, 0
2^k+1 AvKv‡ii †gŠwjK msL¨v¸‡jv‡K dvgvi †gŠwjK msL¨v ejv nq, GLv‡b k nj 2^x AvKv‡ii msL¨v †hLv‡b x GKwU cY msL¨v| 1 †_‡K 126 chš Í KZ¸‡jv dvgvi †gŠwjK msL¨v i‡q‡Q? Fermat primes are prime numbers that can be written in the form 2^k+1 where k is an integer and a power of 2. How many there are Fermat primes from 1 to 126?	4
 ∠x = 60^0 n‡j Δ DEF Ges Δ ABC Gi cwimxgvi cv_K¨ wbYq Ki| In this figure ∠ x = 60^0. Find the difference between the perimeter of Δ ABC and Δ DEF.	0

ck	DËi
 wP‡Î AD = 5, AB = 3 Ges CD = 12| Δ AEC Gi ক্ষেত্রফল KZ? In the figure above AD = 5, AB = 3 and CD = 12. What is the area of triangle Δ AEC?	7.50
3 Rb eÜ cÖZ¨`b GKÖU †i÷‡i‡›Ui †Mvj †Ue‡ji PZ¨`‡K 3ÖU GKB iKg †Pqv‡i e‡m AvÇv †`b| Zviv cÖZ¨`b wfb wfb Öeb¨v‡m em‡Z cQ›` K‡ib| Gfv‡e Pj‡Z _vK‡j me‡gvU KZ¨`b Zviv bZb bZb Öeb¨v‡m em‡Z cvi‡eb? 3 friends chat everyday in a round table in restaurant sitting on same 3 chairs. They like to sit in a new permutation every day. How many days can they sit in new arrangement?	2! = 2
 `ÖU mgvb eË ci¯úi‡K A I C ÖeÀ`‡Z ‡Q` K‡i Ges B I D Pvc `ÖUi ga¨ÖeÀ`| AC ‡iLvs‡ki ^`N¨ 24cm I BD=10cm n‡j e‡Ëi e¨vmva ÖbYq Ki| The crescent moon ABCD is formed with two arcs ABC and ADC which are parts of two equal circles (B and D are midpoints of the circles). Line segment AC=24 cm and BD=10cm. Find the radius of the circle.	13
N Ges P, 1 Gi †P‡q eo †Kvb cYmsL¨v| P, N+4 Ges N+14 Gi Drcv`K| P Gi gvb¸‡jv ÖbYq Ki? If N and P are integers greater than 1 and if P is a factor of both N+4 and N+14, what are the values of P?	2, 5,10
$f(x) = \frac{x^2}{x}$ n‡j f Gi †iÄ KZ ‡hLv‡b $x \in R$? What is the range of f where $f(x) = \frac{x^2}{x}$ and $x \in R$	R-{0}
`kÖU µgK cY msL¨vi c_g cvPÖUi †hvMdj 560, c‡ii cvPÖUi †hvMdj KZ? In an increasing sequence of 10 consecutive imtegers the sum of the first 5 integers is 560. What is the sum of last 5 integers in the sequence?	585
1 †_‡K 1000 chš Í Ggb KqÖU cYmsL¨v Av‡Q hviv 5 A_ev 8 Øviv wefvR¨| How many numbers from 1 to 1000 are divisible by 5 or 8?	300

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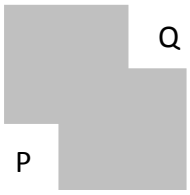
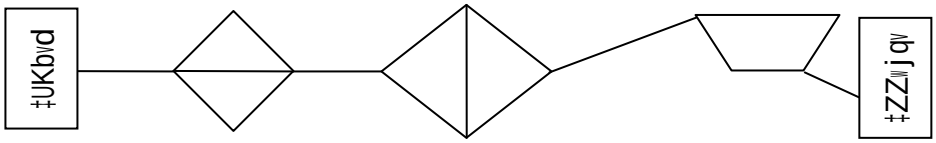
ময়মনসিংহ আঞ্চলিক গণিত অলিম্পিয়াড
Av‡qvRK: evsjv‡`k MÖYZ Aÿwú¤úqvW KwgwU

ক্যাটাগরি: হায়ার সেকেন্ডারি (একাদশ-দ্বাদশ-এইচএসসি) **সময়: ১ ঘন্টা ১৫ মিনিট**

নাম(বাংলায়): **শ্রেণী(২০০৯ সাল):**

Name (In English): **Registration No:**

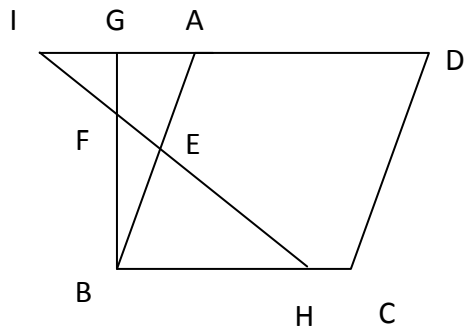
[এই উত্তরপত্রের নির্দিষ্ট স্থানে উত্তর লিখতে হবে। খসড়ার জন্য পৃথক কাগজ ব্যবহার করতে হবে এবং তা জমা দিতে হবে। সকল সংখ্যা ইংরেজীতে লেখা হয়েছে। সবাইকে নিজ নিজ উত্তরপত্র জমা দিতে হবে।]

ck	DËi
egeg ¯‹vDU‡`i m‡¤§j‡b wM‡q‡Q| †mLv‡b c‡Z¨K ¯‹vDU Ab¨ mevi mv‡_ Kig`b Kivi K_v| ‡KD †KD Avevi Kig`b K‡iwb| me‡gvU Kig`‡bi msL¨v 8 n‡j mewbg KZM‡jv Kig`b nqwb? Boomboom joined Scout Jamboree. Every scout was said to handshake with each other. Some of them did not do. The total number of handshakes was 8. Find the minimum number of handshakes which were not done?	2
X †m‡U 1 Gi †P‡q eo cvPwU wfb wfb msL¨v Av‡Q| enËg msL¨vwU me‡P‡q †QvU msL¨v`wUi ¸Yd‡ji mgvb| Avevi me‡P‡q †QvU msL¨vwU enËg msL¨v`wUi we‡qvMd‡ji mgvb| hw` †Kvb msL¨vB 10 Gi †P‡q eo bv nq Zvn‡j X †mUwU wbYq Ki †hb X †m‡Ui msL¨v¸‡jvi †hvMdj m‡ev”P nq| A set X contains 5 distinct natural numbers, all greater than 1. The largest number is the product of the smallest two numbers; the smallest number is the difference of the largest two numbers. If no number is greater than 10, find the set so that the sum of the elements is maximum.	X = {2, 5, 7, 8, 10}
 cv‡ki wPÎwU‡Z mgvb evû wewkó GKwU eM Aci GKwU e‡Mi Dci Ae¯‹vb Ki‡Q| P I Q e‡Mi evûi ga¨we›`y| evûi ‰`N¨ 6 GKK| Qvqv Av”Qw`Z c‡iv GjvKwUi ক্ষেত্রফল wbYq Ki| Two squares of length 6 are put in a position as the figure. P and Q are the midpoint. Find the total shaded area.	63
GKwU Nb‡Ki `wU mwbwnZ cv‡ki is wfb| NbKwU is Ki‡Z mewbg KqwU is jvM‡e? No two adjacent faces of a cube are of same color. What is the minimum number of colors needed to paint a regular cube?	3
 mij‡iLv Øviv GB Qwe‡Z †UKbvd t_‡K †ZZwjqv hvIqvi mKj c_ †`Lv‡bv n‡q‡Q| GKwU B`i †UKbvd t_‡K †ZZwjqv hv‡e, †mLv‡b wM‡q †m GKwU iwUi UKiv ci¯‹vi wn‡m‡e cv‡e| GKB RvqMvq `Bevi bv G‡m †m †gvU KZfv‡e †UKbvd t_‡K †ZZwjqv †h‡Z cvi‡e? The diagram above shows the various paths along which a mouse can travel from point Teknaf, where it is released, to point Tetulia, where it is rewarded with a food pellet. How many different paths from Teknaf to Tetulia can the mouse take if it goes directly from Teknaf to Tetulia without retracting any point along a path?	24
1 †_‡K 300 chš Í Ggb KqwU cYmsL¨v Av‡Q hv 2 wKsev 3 Gi ¸wYZK wKš 8 Gi ¸wYZK bq? From 1 to 300, how many integers are multiples of 2 or 3 but not of 8?	163

WvP-evsjv e¨vsK - c_g Av‡jv MwYZ Drme 2010

ময়মনসিংহ আঞ্চলিক গণিত অলিম্পিয়াড

Av‡qvRK: evsjv‡`k MwYZ Awj¤úqvW KwgwU

ck	DËi
bv‡Ui ewo‡Z 5 †Rvov RZv i‡q‡Q| GjvKvi KL¨vZ †Pvi eë GK iv‡Z bv‡Ui RZv¸‡jv †_‡K 3wU RZv wb‡q cvjv‡jv| H 3wU RZvi g‡a¨ GKwU †Rvov cvevi m¤vebv KZ? Naat has 5 pairs of shoes in his house. One night, a locally well known thief called Boltu came to Naat's house and stole 3 shoes randomly. What is the probability that there was a pair of shoes in those 3 shoes?	$^1/_3$ = 0.33
213ab msL¨wU‡K 100 Øviv fvM Ki‡j 10 Gi †P‡q Kg Aewkó _v‡K †hLv‡b a Ges b `wU AsK wb‡`k K‡i| hw` msL¨wUi mKj As‡Ki †hvMdj 13 nq Zvn‡j b Gi gvb wbYq Ki| A number of the form 213ab, where a and b are digits, has a reminder less than 10 when divided by 100. The sum of all the digits in the above number is equal to 13. Find the digit b	7
$2^{1024} + 5^{1024} +1$ †K 3 Øviv fvM Ki‡j KZ Aewkó _vK‡e? What is the remainder when $2^{1024} + 5^{1024} +1$ is divided by 3?	0
N Ges P, 1 Gi †P‡q eo †Kvb cYmsL¨v| P, N+4 Ges N+10 Gi Drcv`K| P Gi gvb¸‡jv wbYq Ki? If N and P are integers greater than 1 and if P is a factor of both N+4 and N+10, what are the values of P?	2, 3, 6
n hw` 1 †_‡K 15 chš Í msL¨v¸‡jvi ¸Ydj nq, Zvn‡j n Gi †gvU KZ¸‡jv †gŠwjK Drcv`K Av‡Q? If n is the product of the integers from 1 to15, inclusive, how many prime factors greater than 1 does n have?	6
 ABCD GKwU i¤m| 2CH=AE=BE=4 Ges BG⊥AD| ∠ABC=60^0 n‡j FG=? In ABCD rhombus 2CH=AE=BE=4 and BG⊥AD. If ∠ABC=60^0 then find the value of FG.	$\sqrt{3}$