



# Pinnacle

## EduCare

Dream it • Do it

JEE / NEET / Olympiads / NTSE / Boards



### P-TQE 2025

**Pinnacle** Talent Quest Exam

For 6<sup>th</sup> to 10<sup>th</sup> Class Students

STAGE - 1 & STAGE - 2

## Pinnacle Talent Quest Exam

# SAMPLE TEST PAPER

## Class 8<sup>th</sup>

**Pinnacle EduCare**  
www.pinnacleeducare.com



Call

**98153-55955 | 90413-54955**  
Gurunanak Colony, Sangrur, Punjab.





JEE MAIN 2024 **99.91** %ile  
 JEE ADV 2024 **4217** AIR  
**IIT ROPAR**  
 VIRAJ MANOCHA

JEE MAIN 2024 **99.70** %ile  
 JEE ADV 2024 **8238** AIR  
**DTU DELHI**  
 NAMAN JAIN

JEE MAIN 2024 **99.54** %ile  
 JEE ADV 2024 **9718** AIR  
**IIT ROORKEE**  
 KHUSHBOO

JEE MAIN 2024 **99.14** %ile  
 JEE ADV 2024 **9903** AIR  
**IIT ROPAR**  
 ARSHIT GOYAL

JEE MAIN 2024 **99.98** %ile  
 JEE ADV 2024 **958** AIR  
**IIT DELHI**  
 BHARTI GARG

**99.21%** %ile  
**Komalpreet kaur**  
**IIT Allahabad**

**99.45%** %ile  
**Sahaj Bajaj**  
**PEC CHD.**

**99.44%** %ile  
**Prithvi Garg**  
**PEC CHD.**

**99.07%** %ile  
**Ruhani**  
**NIT JALANDHAR**

**98.68%** %ile  
**Khushi Garg**  
**NIT JALANDHAR**



**98.38%** %ile  
**Robin**  
**NIT JALANDHAR**

**98.19%** %ile  
**Rishab Goyal**  
**NIT JALANDHAR**

**Bhumika**  
**IIT BHUVNESHWAR**

**Himanshi**  
**IIT MANDI**

**JEE MAINS & ADVANCE RESULT 2023**

JEE ADV AIR **147**  
 JEE ADV AIR **172**  
 JEE ADV AIR **230**

**99.84** Percentile  
**IIT DELHI**  
 Mayank Jindal

**99.86** Percentile  
**IIT BOMBAY**  
 Dikshit Singla

**99.90** Percentile  
**IIT ROORKEE**  
 Krish Jindal

JEE MAIN 1945 <b>99.88</b> %ile IIT ROORKEE Chetan Singh	JEE ADV AIR 3634 <b>99.51</b> %ile IIT MANDI Siddhant Singh	JEE ADV AIR 4079 <b>99.46</b> %ile IIT BHOPAL Akshay Singh	JEE ADV AIR 6008 <b>99.44</b> %ile IIT DELHI Disha	JEE MAIN 7845 <b>99.85</b> %ile IIT DELHI Pragya	JEE ADV AIR 3353 <b>99.75</b> %ile IIT DELHI Pranav Sharma
<b>99.59</b> %ile IIT ALLAHABAD Garima	<b>99.66</b> %ile DTU DELHI Chetan Singh	<b>99.61</b> %ile DTU DELHI Jai Singh	<b>99.34</b> %ile DTU DELHI Harsh Singh	<b>98.81</b> %ile PEC CHD Chetan	<b>99.45</b> %ile IIT JALANDHAR Rag Singh
<b>97.96</b> %ile PEC CHD Lakshita Gupta	<b>97.11</b> %ile IIT JALANDHAR Harsh Singh	<b>IIT ROPAR</b> Rishi Arora	<b>IIT BHU</b> Rishi Arora		

**SCHOLARSHIPS**  
 UPTO 100 %

**₹1 WORTH CRORE**

FOR REGISTRATION  
 SCAN QR CODE

www.pinnacollege.edu.in

**NEET RESULT**

<b>531/120</b> <b>Prachi</b>	<b>504/120</b> <b>MULANA AZAD DELHI</b> Saransh Garg	<b>531/120</b> <b>QMC PATIALA</b> Riya	<b>541/120</b> <b>QMC PATIALA</b> Pragya	<b>531/120</b> <b>QMC CHD</b> Shweta
<b>531/120</b> <b>QMC PATIALA</b> Behinder Singh	<b>559/120</b> <b>QMC CHD</b> Arya Arora	<b>537/120</b> <b>QMC CHD</b> Chhavi	<b>501/120</b> <b>AIMS-Delhapur</b> Nikhil Singh	<b>520/120</b> <b>DMC-Ludhiana</b> Anshika Aggarwal
		<b>531/120</b> <b>AIMS-Delhapur</b> Anmoldeep Kaur		

Guru Nanak Colony, Sangrur, Punjab.

**98153-55955 | 90413-54955 | 90562-54955**

EWS RANK



# What Makes Pinnacle Unique?

- 1 Best Faculty Team
- 2 Hi-Tech Classrooms
- 3 Customized Study material
- 4 Personal Attention
- 5 Unlimited Doubt Sessions
- 6 Best Testing Methodology



## Classroom Program

### 1 Comprehensive Classroom Lectures

All classes at Pinnacle are conducted by highly qualified and experienced faculty members, mostly IITians. Each chapter is started at the grass root level and is dealt to an extent which is the requirement of competitive examinations, with an aim of enabling the students to develop a comprehensive view of the whole chapter with a thorough understanding.



### Doubt Clearance 2

"If you ask a question, you may appear fool for some time, but if you don't, you'll remain a fool for whole life." System at Pinnacle encourages all students to ask their doubts and questions.

### 3 Regular Tests Online and Offline

As JEE Mains and Advanced have gone completely online and NEET is in the pipeline, we have launched a dedicated online testing platform where students can practise over CBT (Computer Based Tests). The combination of online and offline testing modes based on latest JEE/NEET patterns ensure that students are at par with the recent changes. Students can check their test reports and performance analysis via a unique online login ID. Their results are also communicated to parents via SMS.

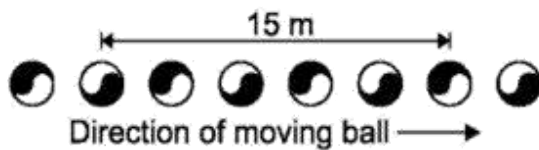


### Addressing the Board Exam 4

Pinnacle has a very distinct methodology for preparing the students for competitive examinations while in full synchronization with Board Exams as well. Board level tests are conducted alongside the regular JEE/NEET tests and the copies are graded at very meticulous level by teachers. Students receive methodological tips so as to perform excellent in the board Exams as well.

## Section – A Science

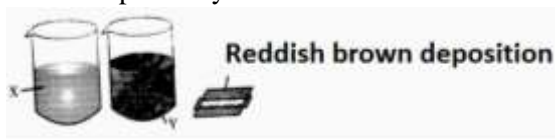
- The coefficient of static friction between two surfaces depends on
  - Nature of surfaces
  - The shape of the surfaces in contact
  - The area of contact
  - All of the above
- The given diagram shows a series of images of a moving ball captured by a camera.



The ball was moving at a constant velocity and the images were taken at a constant rate of 10 per second. What is the speed of the ball in kmph?

- 108 kmph
  - 110 kmph
  - 145 kmph
  - 115 kmph
- A block of mass 2 kg is placed on the floor. The coefficient of static friction is 0.4. Force of 2.8 N is applied on the block. The force of friction between the block and the floor is ( $g=9.8 \text{ m/s}^2$ )
    - 2.8 N
    - 7.84 N
    - 2.0 N
    - zero
  - A girl stands on a box having 60 cm length, 40 cm breadth and 20 cm height in three ways. Pressure exerted by the brick will be
    - Max. when length and breadth form the base
    - Max. when breadth and height form the base
    - Max. when height and length form the base
    - The same in all the above three cases
  - The two high bones (femurs), each of cross-sectional area  $10 \text{ cm}^2$  support the upper part of a human body of mass 40 kg. Estimate the total pressure sustained by both the femurs. (Given  $g = 10 \text{ m s}^{-2}$ )
    - $1 \times 10^5 \text{ Pa}$
    - $2 \times 10^5 \text{ Pa}$
    - $3 \times 10^5 \text{ Pa}$
    - $4 \times 10^5 \text{ Pa}$
  - The vessels shown below all contain water to the same height. Rank them according to the pressure exerted by the water on the vessel bottoms, least to greatest.
 
    - 3,4,2,1
    - 4,3,2,1
    - 2,3,4,1
    - All pressures are the same
  - A box is given a push across the floor. It comes to stop shortly after moving some distance, which one of the following reasons explains this?
    - Gravity is acting on the box in the direction opposite to the box's movement
    - Friction is acting on the box in the same direction of the box's movement
    - Friction is acting on the box in the direction opposite to the box's movement
    - The heat produced during the box's movement slows down the box
  - A ray deviates  $90^\circ$  after suffering reflection from a mirror. The angle of incidence is
    - $90^\circ$
    - $30^\circ$
    - $45^\circ$
    - $60^\circ$
  - When you stand in front of a plane mirror, your image is
    - Real, erect and smaller than you
    - Real, erect and the same size as you
    - Virtual, erect, and smaller than you
    - Virtual, erect, and the same size as you
  - What should be the angle between two plane mirrors so that whatever be the angle of incidence the incident ray and the reflected ray from the two mirrors be parallel to each other?
    - $60^\circ$
    - $90^\circ$
    - $120^\circ$
    - $175^\circ$

11. The nature of oxides of non-metals is:  
 (a) Acidic  
 (b) Neutral  
 (c) Basic  
 (d) Both a and b
12. Carpets made of rayon are blended with:  
 (a) Cotton  
 (b) Silk  
 (c) Nylon  
 (d) wool
13. Choose the correct option for the given statements  
 (i) Plastics are generally bad conductors of electricity  
 (ii) Ropes made by bakelite are used in cranes and elevators  
 (iii) Teflon is a special plastic on which oil and water do not stick  
 (iv) Plastic is non-biodegradable, hence is environment friendly.  
 (a) (i) → T; (ii) → T; (iii) → F; (iv) → F  
 (b) (i) → F; (ii) → F; (iii) → T; (iv) → T  
 (c) (i) → T; (ii) → F; (iii) → T; (iv) → F  
 (d) (i) → F; (ii) → T; (iii) → F; (iv) → T
14. Different components of petroleum are separated by fractional distillation. What is the correct sequence of fractions obtained in the fractionating column from bottom to top?  
 (a) Petroleum gas, lubricating oil, kerosene, gasoline  
 (b) Lubricating oil, Kerosene, gasoline, petroleum gas  
 (c) Petroleum gas, gasoline, kerosene, lubricating oil.  
 (d) Gasoline, kerosene, petroleum gas, lubricating oil
15. Sumit was performing an experiment with a blue coloured solution (X) in a beaker. By mistake a shaving blade fell into the beaker. After half an hour, he found that the colour of the solution in beaker changed to green (Y). What could be the solutions X and Y respectively?



- (a) Copper sulphate, Iron sulphate  
 (b) Iron sulphate, copper sulphate  
 (c) Iron sulphate, zinc sulphate  
 (d) Copper sulphate, zinc sulphate

16. Substance X reacts with dilute HCl violently, Y reacts slowly while Z does not react at all. Y, Z and X could be respectively

- (a) Cu, Al, Fe  
 (b) Al, Cu, K  
 (c) Na, Cu, Fe  
 (d) Al, Cu, Na

17. Match the columns

Column I	Column II
I. Sulphuric Acid	(P) $\text{Ca}_3\text{P}_2$
II. Calcium Phosphide	(Q) $\text{Na}_2\text{ZnO}_2$
III. Sodium Zincate	(R) $\text{H}_2\text{SO}_4$

(a) I-R, II-Q, III-P  
 (b) I-P, II-Q, III-R  
 (c) I-R, II-P, III-Q  
 (d) I-Q, II-P, III-R

18. Match the columns

Column I	Column II
I. Ag	(P) Mercury
II. Au	(Q) Silver
III. Hg	(R) Sodium
IV. Na	(S) Gold

(a) I-S, II-Q, III-R, IV-P  
 (b) I-Q, II-S, III-P, IV-R  
 (c) I-P, II-Q, III-R, IV-S  
 (d) I-R, II-S, III-Q, IV-P

19. Which one of the following four metals would be displaced from the solution of its salt by the other three metals?

- (a) Zn  
 (b) Ag  
 (c) Cu  
 (d) Mg

20.  $\text{Al}_2(\text{SO}_4)_3 + b \text{NaOH} \rightarrow \text{Al}(\text{OH})_3 + d \text{Na}_2\text{SO}_4$   
 Sum of a+b+c+d is

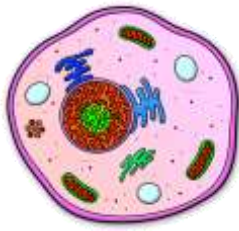
- (a) 7  
 (b) 6  
 (c) 10  
 (d) 12

21. How many of the following living organisms can increase fertility of soil

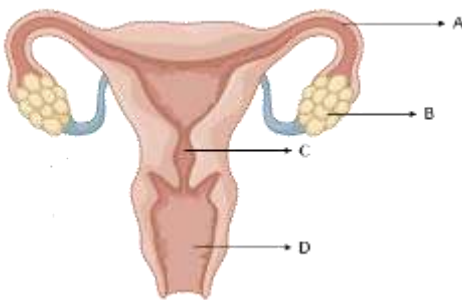
- (i) Rhizobium (ii) Earthworm (iii) Some blue green algae (iv) Lactobacillus (v) Yeast  
 (a) Two  
 (b) Three  
 (c) Four  
 (d) Five



22. The given diagram of cell could probably be a



- (a) Bacterial cell  
 (b) Mycoplasma  
 (c) Animal cell  
 (d) Data insufficient
23. Which of the following is primary sex organ in females?



- (a) A  
 (b) B  
 (c) C  
 (d) D
24. Which of the following statements are incorrect?
- Prolactin is milk 'let down' hormone
  - Pituitary gland is known as master gland
  - Sebaceous gland is an endocrine gland
  - Pituitary gland is heterocrine gland
- (a) I, ii and iii  
 (b) I and ii  
 (c) ii, iii and iv  
 (d) i, iii and iv
25. Consider the following statements and select the option which correctly identifies true (T) and false (F) ones.
- Ploughing is an essential step in Soil Preparation
  - Freshly harvested grains must be dried before storage
  - Green manure is prepared by ploughing down certain plants into the soil
  - Broadcasting of seeds is done by seed drill
- (a) (i) → T; (ii) → T; (iii) → F; (iv) → F  
 (b) (i) → F; (ii) → T; (iii) → F; (iv) → F  
 (c) (i) → T; (ii) → T; (iii) → T; (iv) → F  
 (d) (i) → F; (ii) → T; (iii) → F; (iv) → T

26. Pick the odd one out from each series given below and select the correct option.

- Uterus, Cervix, Prostate Gland, Vagina
  - Scrotum, Epididymis, Seminal vesicle, Fallopian tube
  - Sperm, ovum, gametes, fertilization
- (a) (i) Cervix; (ii) Scrotum; (iii) Gametes  
 (b) (i) Vagina; (ii) Seminal vesicle; (iii) Gametes  
 (c) (i) Prostate gland; (ii) Fallopian tube; (iii) Fertilization  
 (d) (i) Prostate Gland; (ii) Seminal vesicle; (iii) gametes
27. Which of the following statements are correct?
- Sex of a baby is determined by the Y chromosome in males
  - Metamorphosis is observed in humans also
  - Menarche is the beginning of reproductive phase in women
- (a) i only  
 (b) i and ii  
 (c) i and iii  
 (d) All three are correct
28. A bacteria undergoes binary fission in every two minutes. This bacterium can fill up a cup in 1 hour. In how much time will the cup be half filled?
- (a) 48 minutes  
 (b) 58 minutes  
 (c) 30 minutes  
 (d) Data insufficient
29. Consider the following statements and select the option which correctly identifies true (T) and false (F) ones.
- Clostridium botulinum* is one of the bacteria that can cause food poisoning
  - The body of fungus has thread like structural unit called hyphae
  - Vaccine stimulates the immune system of an individual
  - Adding sugar is one of the preservation method in case of jams
- (a) (i) – F; (ii) – F; (iii) – T; (iv) – F  
 (b) (i) – T; (ii) – T; (iii) – T; (iv) – F  
 (c) (i) – T; (ii) – T; (iii) – F; (iv) – T  
 (d) (i) – T; (ii) – T; (iii) – T; (iv) – T
30. Who discovered the first living cell?
- (a) Robert Brown  
 (b) Robert Hooke  
 (c) Leeuwenhoek  
 (d) Purkinje

**Section - B**  
**Mathematics**

31. If the radius of a circle is a rational number, then its area is given by a number which is:
- Rational
  - Irrational
  - Integral
  - A perfect square
32. The sum of rational and irrational number is:
- Rational
  - Irrational
  - Zero
  - Integers
33. Any number  $n$  divided by 3 leaves remainder 1. When  $n^3$  divided by 3, leaves a remainder
- 3
  - 2
  - 1
  - 0
34. The additive inverse of  $\frac{-a}{b}$  is:
- $\frac{a}{b}$
  - $\frac{b}{a}$
  - $\frac{-b}{a}$
  - $\frac{-a}{b}$
35. A and B are friends. A is older to B by 5 years. C is half the age of B while A's father D is 8 years older than twice the age of B. If the present age of D is 48 years, find the present age of A.
- 25 years
  - 26 years
  - 24 years
  - 28 years
36. The least square number exactly divisible by 4, 6, 10, 15 is
- 400
  - 100
  - 25
  - 900
37. Find the value of  $\sqrt[3]{\sqrt{0.000064}}$  is:
- 0.03
  - 0.02
  - 0.2
  - 0.3
38. If 'x' is a perfect square then, the next perfect square is
- $x + 1$
  - $x^2 + 1$
  - $x^2 + 2x + 1$
  - $x + 2\sqrt{x} + 1$
39. If 9,  $(x+20)$ ,  $(x + 21)$  is a Pythagorean triplet, then value of x is:
- 20
  - 30
  - 35
  - 40
40. Hemant purchased 120 rims of paper at ₹ 80 per rim. He spent ₹ 280 on transportation, paid octroi at the rate of 40 paise per rim and paid ₹ 72 to the coolie. If he wants to have a gain of 8%, the selling price per rim must be
- ₹ 85
  - ₹ 88
  - ₹ 90
  - ₹ 95

## Section - C Mental Aptitude

### Part-I (Logical Puzzles)

41. Which of the following statement is/are true?
- There is two days' gap between Swimming and jogging
  - Skipping is done between the rest day and Gymnastics
  - Swimming is done on Thursday
  - All are true

**Directions (Q.No. 12 to 16):** Study the following information carefully and answer the questions given below:

A, B, C, D, E, F and G are sitting in a straight line facing north, but not necessarily in the same order. There is only one person between F and C. E sits between A and D. There are only two persons between E and G. F sits on the immediate left of A, who sits in the middle of the row.

42. How many persons are there between E and F?
- One
  - Two
  - Three
  - Can't be determined
43. Who among the following sit at the extreme ends of row?
- D, F
  - G, C
  - B, C
  - Can't be determined
44. Who among the following sits on the immediate right of D?
- G
  - E
  - F
  - B
45. Who among the following sits third to the right of A?
- C
  - G
  - B
  - E
46. Which of the following statements is true with regard to B?
- B is second to the right of A
  - B is fourth to the left of G
  - B sits at the extreme right end of the row
  - B sits at the extreme left end of the row

**Directions (Q.No. 17 to 20):** Study the following information carefully and answer the questions given below:

In certain code language, 'her village is Sarurpur' is written as 'aa be rs ki', 'Sarurpur people loves her' is written as 'rs ub ki wa', 'village people collect literature' is written as 'ba wa aa de', 'literatrue makes her perfect' is written as 'lo de ki fa'.

47. What is the code for 'people'?
- Pi
  - ub
  - wa
  - ki
48. What does 'be' stand for?
- Village
  - Loves
  - Sarurpur
  - Is
49. Which of the following is the code for 'village collect perfect loves'?
- ub aa fa ba
  - fa ub rs aa
  - aa ba ub lo
  - Cannot be determined
50. Which of the following is represented by the code 'rs ba de be'?
- Collect literature is Sarurpur
  - Village people makes perfect
  - Village is made literature
  - People collect perfect literature

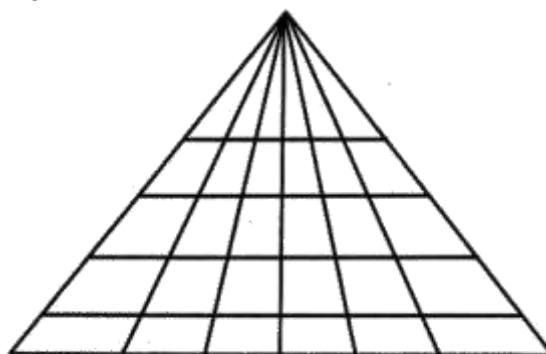


## Part-II (Mathematical Puzzles)

51. A few monkeys are moving. The 1<sup>st</sup> monkey says. "There are 8 monkeys behind me". The last monkey says, "There are 8 monkeys in front of me". The monkey in the middle says, "There are 8 monkeys in front of me and 8 monkeys behind me". How many monkeys are moving?
52. Mr. & Mrs. Khan live happily with their 4 sons and each son has 3 sisters. There is no one else in the family. Every child of Khan family shakes hand with each of his/her brothers and sisters. How many total handshakes have been performed?
53. You have six 8's and you may use any of the (+, ., -, /, ×) as many times as you like. How many arithmetical expressions which use the six 8's to form 1000 are possible?
54. On a dark night, 11 soldiers and 2 boys are on one side of a bridge which they need to cross. The soldiers weigh 80 kg each and the boys weigh 40 kg each. The bridge can bear a maximum load of 80 kg. It is mandatory for at least one person to carry a torch. Unfortunately, they have only 1 torch between them and the bridge is long so that they cannot throw the torch to the other side of it. All the 13 people take exactly 1 minute to cross the bridge. What is the minimum possible time in which all 13 of them can cross the bridge? (Assume the weight of the torch to be negligible)?
55. In an India –Pakistan T20 Match, Sachin Tendulkar faces the 1<sup>st</sup> ball. Let the maximum number of runs that he can score in the match are Y. Then what is the value of  $Y/39$ . (Assume there are no wides, no no-balls, no overthrows and the batsman can take a maximum of only 3 runs while running).
56. Read the following information and answer the questions that follow.  
There are 70 clerks working with M/s. Jha Lal Khanna & Co. chartered accountant, of which 30 are female.
- I. 30 clerks are married.
  - II. 24 clerks are above 25 years of age
  - III. 18 Married clerks are above 25 years of age; among them 7 are males.
  - IV. 12 males are above 25 years of age

How many unmarried girls are there above 25?

57. A shopkeeper wants to measure all the integral weights from 1 kg to 100 kg using a common balance only once. He can keep the weights on only one side of the balance. For ex. If a customer comes and asks for 35kg sugar, he should be able to put some combination of weights on one side of the balance such that total of these weights becomes 35. Similarly he should be able to measure 1kg, 2kg, 3kg,..... 99kg and 100 kg. What is the minimum number of weights needed?
58. Sam bought a box which contained some bananas for his 5 friends. None of his friends knew how many bananas are there. Sam asked them to guess the number of bananas in the box. Their guesses were 33, 37, 41, 51 and 39 but none of the guesses were correct. Sam then told them that their guesses deviated from the actual number of bananas by 5, 9, 1, 9 and 3 in no particular order. Can you tell the number of bananas in the box?
59. You have 8 black socks, 14 white socks and 18 grey socks in your drawer. The room is completely dark and you have no source of artificial light. What is the minimum number of socks that you'll have to pick up to ensure that you have a correct pair (a pair of same coloured socks)?
60. Let the no of triangles in the figure given below is X. Then find the value of X-20.





SPACE FOR ROUGH WORK

**Answer Key**

1	<b>a</b>	21	<b>b</b>	41	<b>b</b>
2	<b>a</b>	22	<b>c</b>	42	<b>a</b>
3	<b>a</b>	23	<b>b</b>	43	<b>c</b>
4	<b>b</b>	24	<b>b</b>	44	<b>d</b>
5	<b>b</b>	25	<b>c</b>	45	<b>c</b>
6	<b>d</b>	26	<b>c</b>	46	<b>c</b>
7	<b>c</b>	27	<b>c</b>	47	<b>c</b>
8	<b>c</b>	28	<b>b</b>	48	<b>d</b>
9	<b>d</b>	29	<b>d</b>	49	<b>d</b>
10	<b>b</b>	30	<b>c</b>	50	<b>a</b>
11	<b>d</b>	31	<b>b</b>	51	<b>9</b>
12	<b>b</b>	32	<b>b</b>	52	<b>21</b>
13	<b>c</b>	33	<b>c</b>	53	<b>3</b>
14	<b>b</b>	34	<b>a</b>	54	<b>45</b>
15	<b>a</b>	35	<b>a</b>	55	<b>17</b>
16	<b>d</b>	36	<b>d</b>	56	<b>1</b>
17	<b>c</b>	37	<b>c</b>	57	<b>7</b>
18	<b>b</b>	38	<b>d</b>	58	<b>42</b>
19	<b>b</b>	39	<b>a</b>	59	<b>4</b>
20	<b>d</b>	40	<b>c</b>	60	<b>85</b>



