FIITJEE SAMPLE PAPER - 2018

(Big Bang Edge Test / Talent Recognition Exam)

for students presently in

Class 5 (Paper 1)

Time: 3 Hours (9:30 am - 12:30 pm)

Code | 5000

Maximum Marks: 240

Instructions:

Caution: Class, Paper, Code as given above MUST be correctly marked on the answer OMR sheet before attempting the paper. Wrong Class, Paper or Code will give wrong results.

- 1. You are advised to devote 35 Minutes on Section-I, 35 Minutes on Section-II, 50 Minutes on Section-III, 30 Minutes on Section-IV and 30 Minutes on Section-V.
- 2. This Question paper consists of 5 sections. Marking scheme is given in table below:

Section	Subject		Question no.	Marking Scheme for each question	
Section	Subject		Question no.	correct answer	wrong answer
SECTION - I	APTITUDE	1 to 12	+3	0	
SECTION -1	APTITODE		13 to 18	+4	0
	PHYSICS	(PART-A)	19 to 22	+2	0
05051011 11	CHEMISTRY	(PART-B)	23 to 26	+2	0
SECTION – II	MATHEMATICS	(PART-C)	27 to 31	+2	0
	BIOLOGY	(PART-D)	32 to 36	+2	0
	PHYSICS	(PART-A)	37 to 48	+1.5	0
	CHEMISTRY	(PART-B)	49 to 60	+1.5	0
SECTION – III	MATHEMATICS	(PART-C)	61 to 72	+1.5	0
	BIOLOGY	(PART-D)	73 to 84	+1.5	0
	PHYSICS	(PART-A)	85 to 87	+3	0
	CHEMISTRY	(PART-B)	88 to 90	+3	0
SECTION – IV	MATHEMATICS	(PART-C)	91 to 93	+3	0
	BIOLOGY	(PART-D)	94 to 96	+3	0
05051011 1/	MATHEMATICS	(PART-A)	97 to 102	+3	0
SECTION - V	MATHEMATICS	(PART-B)	103 to 108	+3	0

- 3. Answers have to be marked on the OMR sheet. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
- 4. Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
- 5. Before attempting paper write your OMR Answer Sheet No., Registration Number, Name and Test Centre in the space provided at the bottom of this sheet.
- 6. See method of marking of bubbles at the back of cover page for question no. 103 to 108.

Note: Please check this Question Paper contains all 108 questions in serial order. If not so, exchange for the correct Question Paper.

OMR Answer Sheet No	0. :
Registration Number	:
Name of the Candidate	e:
Test Centre	:

For questions 103 to 108 Numerical based questions single digit answer 0 to 9 Example 1: If answer is 6. Correct method: 0 1 2 3 4 5 6 7 8 9 Example 2: If answer is 2. Correct method: 0 1 2 3 4 5 6 7 8

Recommended Time: 35 Minutes for Section - I

Section - I

APTITUDE TEST

This section contains 18 Multiple Choice Questions number 1 to 18. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

Directions (Q. 1 to 3): What should come in the place of the question mark (?) in the following questions?

1.	$(8226 \div 3) \times \frac{1}{2} = ?$	
	(A) 2156	(B) 1371
	(C) 1206	(D) 1202
_		

Directions (Q. 4 to 5): In each of the following questions choose appropriate option from given alternatives such that the relationship defined by ':' is preserved.

4.	Carrot : Vegetable : : Apple : ?	
	(A) Plant	(B) Fruit
	` '	
	(C) Flower	(D) Seed
5.	Hot : Cold : : Light : ?	
J.		(D) 0 "
	(A) Dark	(B) Small
	(C) Large	(D) Tiny
	(e) Large	(D) Tilly

6. Arrange the following words in alphabetical order and choose the word which comes at 3rd place.

(A) Chops (B) Chord (C) Champ (D) Chopper

Directions (Q. 7 to 8): In the following questions, you are given some letters which follow a set pattern. There are four answer choices chose the answer choice that can replace the '?' in the series?

7. C, E, G, I, ?

(A) W

(C) K

(B) L

(D) F

8. U, O, I, E, ?

(A) B

(C) G

(B) C (D) A

9. Find the missing number that comes in the place of question mark (?).

7 3 4 4 5 28 12 ?

(A) 30

(C) 20

(B) 40

(D) 50

Directions (Q. 10 to 12: In each of the following questions, which word cannot be formed by using the letter of given word.

10. TRANSFORM

(A) TRAIN

(C) ROAM

(B) FORT

(D) RANSOM

11. CONSTITUTIONAL

(A) LOCATION

(C) TALENT

(B) TUTION

(D) CONSULT

12. COURAGEOUS

(A) COURAGE

(C) COURSE

(B) SOURCE

(D) GENEROUS

questic (A) A, (B) C i	ion (Q. 13 to 15): Study the following stateme ons given below: B, C, D and E are five boys sitting in a circle. is sitting immediately to the left of E. is sitting between D and E.	nts marked as (A), (B) and (C) and answer the	
13.	Who is sitting to the immediate left hand side of (A) E (C) B	C? (B) A (D) D	
14.	Who is sitting exactly between B and A? (A) C (C) D	(B) E (D) None of these	
15.	E is sitting exactly between? (A) B and D (C) B and E	(B) D and E (D) A and C	
Directions (Q. 16 to 18): In the given figure rectangle represents boys in a class, Triangle represents students with weight more than 50 kg wt. and Circle represents students with height more than 5 feet, now answer the following questions			
16.	No. of boys taller than 5 feet but less than 50 kg (A) 5 (C) 3	(B) 7 (D) 6	
17.	Number of boys more than 5 feet height and he (A) 7 (C) 4	avier than 50 kg is (B) 6 (D) 5	
18.	No. of boys less than 50 kg and shorter than 5 f (A) 5	eet is (B) 6 (D) 2	

Recommended Time: 35 Minutes for Section - II

Section - II

PHYSICS - (PART - A)

This part contains 4 Multiple Choice Questions number 19 to 22. Each guestion has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

- The gravitational constant depends on the 19.
 - (A) Mass of the bodies
 - (C) Both (A) and (B)
- 20. Which of the following is an agricultural tool?

 - (A) Divider
 - (C) Vice
- 21. Which of the following is correct?
 - (A) 1 km = 100 m
 - (C) 1 mm = 10 km

- (B) Harrow
- (D) Hammer
- (B) 1 cm = 10 mm

(D) None of these

(B) Distance between the bodies

(D) 1 dm = 100 m

- What is CGS unit of force? 22.
 - (A) Newton
 - (C) Km

- (B) Dyne
- (D) Joule

CHEMISTRY - (PART - B)

This part contains **4 Multiple Choice Questions** number **23 to 26**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

- 23. Which of the following gases is present in largest amount in air?
 - (A) Carbon dioxide

(B) Nitrogen

(C) Oxygen

(D) Argon

- 24. Which one of the following is an example of non-renewable resources?
 - (A) Wind

(B) Water

(C) Vegetation

(D) Coal and minerals

- 25. The water cycle in nature involves the following processes sequentially:
 - (A) Evaporation, precipitation, condensation
 - (B) Precipitation, condensation, evaporation
 - (C) Evaporation, condensation, precipitation
 - (D) Condensation, evaporation, precipitation
- 26. Expansion gaps are left in the railway tracks because these gaps accommodate the expansion of rails during hot weather without damaging the tracks. This process is an application of :
 - (A) A physical change

(B) Expansion of metals on heating

(C) Contraction of metals on cooling

(D) All of the above

MATHEMATICS - (PART - C)

This part contains 5 Multiple Choice Questions number 27 to 31. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

- $1\frac{1}{4}$ is same as 27.

- 28. Write the sum of 0.35 + 0.42
 - (A) 0.72
 - (C) 0.74

- (B) 0.73
- (D) 0.77
- 29. Express each of the following percents as a ratio in the simplest form
 - (i) 25%, (ii) 50%, (iii) 4%, (iv) 20%
 - (A) (i) 1:5
 - (iii) 1:4 (B) (i) 1:2
 - (iii) 1:25
 - (C) (i) 1:4 (iii) 1:25
 - (D) (i) 1:35
- (iii) 1:4

- (ii) 1:2
- (iv) 1:25
- (ii) 1:4
- (iv) 1:5
- (ii) 1:2
- (iv) 1:5 (ii) 1:3
- (iv) 1:5
- 30. Cost price of an object is Rs 400 and selling price of that object is Rs 600. What is profit/loss?
 - (A) profit = Rs 1000

(B) loss = Rs 200

(C) loss = Rs 1000

- (D) Profit = Rs 200
- 31. In the given figure m || n and angles 1 and 2 are in the ratio of 3: 2. Find the angle 5 and 6.
 - (A) 70° and 110°
 - (B) 80° and 100° (C) 105° and 75°
 - (D) 72° and 108°

BIOLOGY - (PART - D)

This part contains **5 Multiple Choice Questions** number **32 to 36.** Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

Which is the good source of Protein? (A) Green vegetables (C) Fruits	(B) Rice (D) Eggs
Which food item mainly provides energy? (A) Rice (C) Meat	(B) Fish (D) All of these
Which of the following is NOT true about stems? (A) They transport water (C) They transport food and nutrients	(B) They transport air (D) They hold up the plant to get sunlight
Birds that swim in water have (A) Webbed feet. (C) Long legs.	(B) Clawed feet. (D) Short legs.
Penguins live in the Polar Regions. Which adapted (i) They have a layer of fat under their skin. (ii) They have webbed feet. (iii) they migrate to warmer climates during win (A) Only (i) and (ii)	
	(A) Green vegetables (C) Fruits Which food item mainly provides energy? (A) Rice (C) Meat Which of the following is NOT true about stems? (A) They transport water (C) They transport food and nutrients Birds that swim in water have (A) Webbed feet. (C) Long legs. Penguins live in the Polar Regions. Which adap (i) They have a layer of fat under their skin. (ii) They have webbed feet. (iii) they migrate to warmer climates during win

Recommended Time: 50 Minutes for Section - III

Section - III

PHYSICS - (PART - A)

This part contains 12 Multiple Choice Questions number 37 to 48. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

37.	What is relation between energy and power?	
	(A) Power = $\frac{\text{Energy}}{\text{Time}}$	(B) Power = Energy × Time
	(C) Power = Energy	(D) None of these
38.	Which of the following is the unit(s) of length? (A) Cubit (C) Killometer	(B) Meter (D) All of these
39.	To break the mud rock on the surface of the soil. (A) Wooden plank (C) Harrow	can be used. (B) Seed drill (D) Both (A) and (B)
40.	The force applied by waters (on an object), wher (A) Gravitational force (C) Frictional force	n it is displaced by an object, is known as (B) Buoyant force (D) Resisting force
41.	This is an example of which class lever? (A) First class lever (B) Second class lever (C) Third class lever (D) None of these	E L L F
42.	Which of the following force opposes relative mo (A) Friction (C) Buoyant	tion? (B) Gravitational (D) All of these

43.	Which of the following is/are non contact forces (A) Gravitational (C) Friction	(B) Magnetic (D) Both (A) and (B)
44.	The weight of body is (A) Mass of body (C) Frictional force	(B) Force of gravitation on body (D) None of these
45.	Which of the following is used to measure weigh (A) Barometer (C) Hydrometer	t of body? (B) Spring balance (D) Anemometer
46.	is the ability to do work.	
	(A) Energy	(B) Simple machine
	(C) Complex machine	(D) Force
47.	Which of the following is a complex machine? (A) Wheel and axle (C) Sewing machine	(B) Pulley (D) Wedge
48. Which of the following is the renewable source of energy		of energy
	(A) Water	(B) Biomass
	(C) Petrol	(D) Both (A) and (B)

CHEMISTRY - (PART - B)

This part contains 12 Multiple Choice Questions number 49 to 60. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

49.	The shipping industry has to bear huge financial loss because of rusting of ships. The rusting of ships occur, because: (A) The body of ship is always in contact with water (B) The air around the ship is moist (C) Presence of salt in sea water speed up the process of rusting (D) All of the above	
50.	Water is a good (A) Solute (C) Solution	(B) Solvent (D) Emulsion
51.	The ocean of air surrounding the earth, is called (A) Lithosphere (C) Atmosphere	: (B) Stratosphere (D) Ionosphere
52.	Great loss of life and property is caused by(A) Natural things (C) Natural disasters	(B) Blocking of rivers (D) Diseases
53.	Sandstone and limestone are examples of (A) Igneous rock (C) Sedimentary rock	(B) Metamorphic rock (D) None of these
54.	Among the following, which is not a natural calar (A) Earthquake (C) Landslide	nity? (B) Explosion (D) Drought
55.	Among the following which is liquid fuel? (A) Petrol (C) Coal	(B) LPG (D) CNG

56.	The water fit for drinking is called : (A) River water (C) Potable water	(B) Rain water (D) Ground water
57.	Which among the following is a primary rock? (A) Sedimentary (C) Metamorphic	(B) Igneous (D) None of the above
58.	Harmful substance released by power plants occ (A) Carbondioxide (C) Potassium	curs as : (B) Oxygen (D) Magnesium
59.	Which of the following fuels causes minimum en (A) Coal (C) Diesel	vironmental pollution? (B) Hydrogen (D) Kerosene
60.	Each kind of rock is made of : (A) Same minerals (C) Lava	(B) Different minerals (D) None of these

(D) 40°

MATHEMATICS - (PART - C)

This part contains 12 Multiple Choice Questions number 61 to 72. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

- 61. In the given figure ABCD is a quadrilateral. Find the value of x.

 (A) 70°

 (B) 60°

 (C) 50°

 A

 40°

 100°

 150°

 x°

 D
- 62. Find the area of rectangle, whose length is 48m and breadth is 14 m (A) 675 m² (B) 674 m² (C) 671 m² (D) 672 m²
 63. If x + 3 = 8, then find the value of x
- (A) 5 (C) 7 (B) 6 (D) 8
- (A) 14 (C) 9 (B) 13 (D) 64
- 65. 1g is equal to how much kg
 (A) 0.001kg
 (C) 0.0001 kg
 (B) 0.01kg
 (D) all
- 66. Express each of the following as a decimal
 (i) 55%, (ii) 15%
 (A) (i) 0.15, (ii) 0.55
 (C) (i) 0.56, (ii) 0.68
 (D) all

- 67. The cost price of an object is Rs 72. It is sold at a loss of Rs 15. Find its selling price.
 - (A) SP = Rs 57

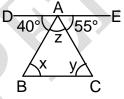
(B) SP = Rs 50

(C) SP = Rs 56

- (D) SP = Rs 55
- 68. In the given figure $\,\ell\,$ and m are intersecting each other at
 - O. Find the value of x.
 - (A) 40°
 - (B) 35°
 - (C) 30°
 - (D) 45°



- 69. In the given figure ABC is a triangle and DE || BC. Find (x, y and z).
 - (A) 40°, 55° and 85°
 - (B) 55°, 85° and 40°
 - (C) 85°, 50° and 45°
 - (D) 55°, 40° and 80°



- 70. Find the area of a square whose one side is 4 m
 - (A) 16 m²
 - (C) 17 m²

- (B) 15 m² (D) 9 m²
- 71. If $\frac{x}{8} = 9$, then find the value of x
 - (A) 72

(B) 71

(C) 69

- (D) 68
- 72. If 3(x + 6) = 21, then find the value of x
 - (A) 1

(B) 2

(C) 3

(D) 4

BIOLOGY - (PART - D)

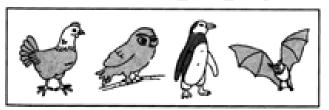
This part contains 12 Multiple Choice Questions number 73 to 84. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

73.	Which food item has mainly fat? (A) Butter (C) Green vegetable	(B) Fish (D) None of these
74.	We get vitamin A from which of the following? (A) Liver (C) Carrot	(B) Lemon (D) Pulses
75.	Which of the following is a communicable disea (A) Typhoid (C) Obesity	se? (B) Diabetes (D) Heart diseases
76.	Which food item has carbohydrates and fats? (A) Bread and butter (C) Egg and fish	(B) Rice and pulses (D) All of these
77.	What do leaves mostly do? (A) Make food (C) Absorb Water	(B) Absorb minerals (D) Hold the plant in place
78.	What do roots do? (A) Absorb water (C) Hold the plants in place	(B) Absorb Nutrients (D) All of the above.
79.	When a seed begins to sprout and leaves and a (A) Germination (C) Photosynthesis	a stem appear, it is called (B) Fertilization (D) Respiration
80.	What is the process in which a plant takes in ca (A) Fertilization (C) Photosynthesis	rbon dioxide and releases oxygen? (B) Germination (D) Respiration

- 81. What is the adaptation by which a grasshopper protects itself from being eaten by its predator?
 - (A) It tastes bad.

- (B) By the hard covering on its body
- (C) It can camouflage itself in the grass
- (D) It has a poisonous sting.
- 82. Animals use different methods to escape from their predators. Which one of the following is NOT true?
 - (A) The lizard sheds a wriggling tail to distract the enemy.
 - (B) The grasshopper has powerful hind legs to hop away quickly.
 - (C) Crocodiles, lizards and turtles use their legs to crawl on the ground.
 - (D) A snake and a worm use their legs to crawl on the ground.
- 83. How are birds adapted for flight?
 - (a) Their body shape
 - (b) Smooth waxy feathers
 - (c) Hollow bones
 - (d) Flight muscles
 - (A) Only (a) and (b)
 - (C) Only (a), (b) and (c)

- (B) Only (c) and (d)
- (D) (a), (b), (c) and (d)
- 84. The bat does not belong to the same group of animals as the other three living beings because it.............



- (A) Is a carnivore
- (C) Hunts at night

- (B) Can fly
- (D) Does not have feathers

Recommended Time: 30 Minutes for Section – IV Section – IV

PHYSICS - (PART - A)

This part contains 3 Multiple Choice Questions number 85 to 87. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

85.	People cleaning the garbage around us is an (A) Force (C) Distance	example of (B) Work (D) None of these
86.	What is S.I unit of work? (A) Joule (C) Dyne	(B) Newton (D) Watt
87.	What is the value of mega? (A) 10 ⁶ (C) 10 ³	(B) 10 ⁵ (D) 10

CHEMISTRY - (PART - B)

This part contains **3 Multiple Choice Questions** number **88 to 90**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

- 88. The process by which a liquid changes to its solid form
 - (A) Evaporation

(B) Solidification

(C) Condensation

- (D) None of these
- 89. Which of the following rocks contains calcium?
 - (A) Granite

(B) Obsidian

(C) Limestone

- (D) Shale
- 90. Which of these may cause fire?
 - (A) Burning matches

(B) Electrical faults

(C) Gas leaks

(D) All of these

MATHEMATICS - (PART - C)

This part contains 3 Multiple Choice Questions number 91 to 93. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

- What will be the sum of $\frac{7}{12}$ and $\frac{3}{12}$ 91.
 - (A) $\frac{10}{13}$

(C) $\frac{8}{12}$

- 92. 0.04 is equal to
 - (A) $\frac{1}{4}$

(C) $\frac{1}{25}$

- (D) all
- The sum of two angles of a triangle is equal to its $3^{\rm rd}$ angle. Find the $3^{\rm rd}$ angle. (A) 90° (B) 30° 93.

(C) 60°

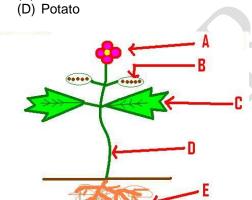
(D) 45°

BIOLOGY - (PART - D)

This part contains **3 Multiple Choice Questions** number **94 to 96**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.

(B) Milk

- 94. Which food item has calcium?
 - (A) Honey
 - (C) Sugar
- 95. What part of the plant is marked as **A** in the given figure?
 - (A) Flower
 - (B) Stem
 - (C) Roots
 - (D) Leaves



96. Study the table given below. Which of these is incorrectly matched?

	Animal	Outer Covering			
(A)	polar bear	Fur			
(B)	leopard	Feather			
(C)	Turtle	Shell			
(D)	snake	Scales			

Recommended Time: 30 Minutes for Section - V Section - V

MATHEMATICS - (PART - A)

This part contains 6 Multiple Choice Questions number 97 to 102. Each question has 4 choices (A), (B), (C) and (D), out of which ONLY ONE is correct.

- 97. Find the area of circle, whose radius is 7 cm $\left(\pi = \frac{22}{7}\right)$
 - (A) 156 cm²

(B) 154 cm²

(C) 157 cm²

- (D) 158 cm²
- 98. Cost price of an object is Rs 1280 and selling price of that object is Rs 1260. What is profit/loss?

(A) profit = Rs 20

(B) loss = Rs 20

(C) profit = Rs 40

(D) loss = Rs 40

99. Find $4\frac{2}{5} - 2\frac{1}{5}$

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

(B) $3\frac{1}{5}$

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

(D) $3\frac{1}{4}$

- 100. 11.35 is read as
 - (A) eleven point three five
 - (C) eleven point five three

- (B) eleven point fifty three
- (D) none
- 101. Find the following as 130% of 20 kg

(A) 26

(B) 25

(C) 24

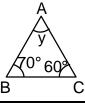
- (D) all
- 102. In the given figure $\angle B = 70^{\circ}$ and $\angle C = 60^{\circ}$. Find $\angle A$

(A) 50°

(B) 80°

(C) 70°

(D) 60°



MATHEMATICS - (PART - B)

This part contains 6 Numerical Based Questions number 103 to 108. Each question has Single Digit Answer 0 to 9.

- 103. If the circumference of a circle with radius 2 cm is $n\pi$, find the value of n.
- 104. What percent of 500 is 30?
- 105. If the angles of a triangle are 10x, 15x and 20x, find the value of x.
- 106. Find the average of 1, 3, 6, 8, 12.
- 107. 2 kg of rice is bought for Rs 100 per kg. If 1 kg is sold at Rs 118 per kg and the rest is sold at Rs 100 per kg, what is the net profit percent?
- 108. What is the sum of $1\frac{3}{9}$, $2\frac{3}{9}$ and $3\frac{3}{9}$?

FIITJEE SAMPLE PAPER - 2018

(Big Bang Edge Test / Talent Recognition Exam)

for students presently in

Class 5 (Paper 1) ANSWERS

1.	В	2.	D	3.	В	4.	В
5.	Α	6.	Α	7.	C	8.	D
9.	С	10.	Α	11.	C	12.	D
13.	С	14.	С	15.	D	16.	Α
17.	С	18.	В	19.	D	20.	В
21.	В	22.	В	23.	В	24.	D
25.	С	26.	D /	27.	В	28.	D
29.	С	30.	D	31.	D	32.	D
33.	Α	34.	В	35.	A	36.	D
37.	Α	38.	D	39.	Α	40.	В
41.	Α	42.	A	43.	D	44.	В
45.	В	46.	A	47.	С	48.	D
49.	D	50.	В	51.	С	52.	С
53.	C	54.	В	55.	Α	56.	С
57.	В	58.	A	59.	В	60.	В
61.	A	62.	D	63.	Α	64.	Α
65.	A	66.	В	67.	Α	68.	В
69.	A	70.	Α	71.	Α	72.	Α
73.	A	74.	С	75.	Α	76.	Α
77.	A	78.	D	79.	Α	80.	С
81.	C	82.	D	83.	D	84.	D
85.	В	86.	Α	87.	Α	88.	В
89.	С	90.	D	91.	D	92.	С
93.	Α	94.	В	95.	Α	96.	В
97.	В	98.	В	99.	С	100.	Α
101.	Α	102.	Α	103.	4	104.	6
105.	4	106.	6	107.	9	108.	7