FSP MATHEMATICS CONTEST

QUESTION BOOKLET 2021

GRADE 5 & 6

TIME ALLOWED: 90 Minutes | **MAXIMUM MARKS: 90**

INSTRUCTIONS

1) DON'T START ATTEMPTING THE PAPER UNTIL INSTRUCTED BY THE INVIGILATOR.

2) INSTRUCTIONS FROM THE EXAMINATION INVIGILATOR MUST BE CARRIED OUT PROMPTLY.

3) CAREFULLY RECHECK YOUR NAME, FATHER NAME, SCHOOL NAME, ADDRESS ETC AT THE BUBBLE SHEET / ANSWER SHEET.

4) RECORD ALL ANSWERS ON THE BUBBLE SHEET ONLY. SELECT BEST ANSWER FROM THE FOUR GIVEN OPTIONS AND MARK ONLY ONE OPTION IN EACH QUESTION.

5) USE BLUE / BLACK INK TO FILL UP THE CIRCLES FOR YOUR ANSWERS ON THE BUBBLE SHEET. USE OF LEAD PENCIL IS NOT ALLOWED.

6) USE OF ANY HELPING MATERIAL INCLUDING CELL PHONES AND ELECTRONIC DEVICES IS STRICTLY PROHIBITED.

7) EVERY CORRECT ANSWER EARNS THREE POINTS. THERE WOULD BE NEGATIVE MARKING. ONE POINT WOULD BE DEDUCTED FOR EVERY INCORRECT ANSWER.

8) CANDIDATES MAY NOT LEAVE THE EXAMINATION ROOM UNESCORTED FOR ANY REASON, AND THIS INCLUDES USING THE WASHROOM.

9) NO MATERIALS OR ELECTRONIC DEVICES SHALL BE BROUGHT IN TO THE ROOM.

10) THERE ARE FIVE CATEGORIES OF THE CONTEST AS UNDER:

A) VIBRANT YOUNGSTERS (GRADE 1 & 2)

B) VIBRANT YOUNGSTERS (GRADE 3 & 4)

C) VIBRANT YOUNGSTERS (GRADE 5 & 6)

D) VIBRANT YOUNGSTERS (GRADE 7 & 8)

E) VIBRANT YOUNGSTERS (GRADE 9 & 10 / 0-LEVELS)

11) ONLY REGISTERED STUDENTS CAN PARTICIPATE IN THE CONTEST.

12) NO CANDIDATE SHALL TAKE OUT OF THE HALL ANY ANSWER BOOK(S) OR PART OF AN ANSWER BOOK, WHETHER USED OR UNUSED, OR OTHER SUPPLIED MATERIAL.

13) IF A PARTICIPANT DOES NOT UNDERSTAND A WORD OR PHRASE ON THE EXAM PAPER, NEITHER EXAMINER NOR INVIGILATOR IS PERMITTED TO ANSWER.

14) FOR INFORMATION ABOUT UPCOMING CONTESTS OR PROVIDING VALUABLE FEEDBACK, PLEASE VISIT WWW.FSPCOMPETITIONS.ORG

15) ANY ACADEMIC MISCONDUCT OR MALPRACTICE MUST BE REPORTED TO FSP VIBRANT YOUNGSTERS AT INFO@FSPCOMPETITIONS.ORG

Q.1) John bought 4 packs of white T-shirts and 5 packs of blue T-shirts for his basketball team. The white T-shirts come in packs of 8, and the blue T-shirts come in packs of 4. How many T-shirts did Darren buy in all?

A. None of these B. 52 C. 56 D. 12
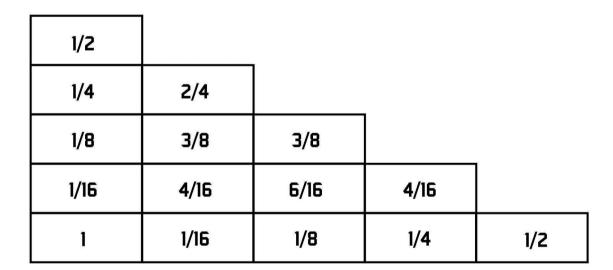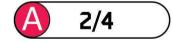
Q.2) What would result in the largest number?

A. 705 divided by 3 B. 705 divided by 4

C. 705 divided by 5 D. 705 divided by 905

Q.3) Which is the largest number in the picture?

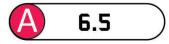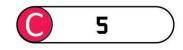| 1/2				
1/4	2/4			
1/8	3/8	3/8		
1/16	4/16	6/16	4/16	
1	1/16	1/8	1/4	1/2

A. 2/4 B. 3/8 C. 1 D. 6/16

Q.4) Calculate: 4.5 x (3.5- 2.5) + 1.5

A. 6.5 B. 5.5 C. 5 D. 6

Q.5) A restaurant owner washed 38 kilograms of vegetables, some broccoli & some corn. The broccoli came in 9-kilogram bags and the corn came in 2-kg bags. The owner washed 5 bags of vegetables in all. How many bags of each kind did he wash?

(A) 1 Bags of broccoli, 4 Bags of corn

(B) 3 Bags of broccoli, 3 Bags of corn

(C) 3 Bags of broccoli, 2 Bags of corn

(D) 4 Bags of broccoli, 1 Bags of corn

Q.6) On a modern art painting, there are 4 green dots in the first row 6 green dots in the second row 9 green dots in the third row, 13 green dots in the fourth row and 18 green dots in the fifth row. If this pattern continues, how many green dots will there be in the sixth row?

(A) 28   (B) 26   (C) 24   (D) 20

Q.7) Kane went for a hike on Wednesday at camp. The hike took 2 hours and 45 minutes. As soon as he got back, Kane played volleyball for 1 hour and 45 minutes. It was 9:45A.M. when Damon finished playing volleyball. What time did Kane start his hike?

(A) 9:50   (B) 8:45   (C) 8:00   (D) 5:15

Q.8) Four-eighths of the 16 books on a shelf are about Mathematics. How many Mathematics books are on the shelf?

(A) 16   (B) 14   (C) 12   (D) 8

Q.9) The grading scheme for an examination is described below:
(1) If the number of correct answer is N which is less than 6, then Total Score = N X 12.
(2) If the number of correct answers in N which is more than or equalto 6, then Total Score =N X 8 + 20.
Compute the total score for the examination paper below:

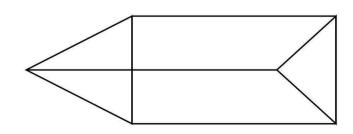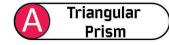| Problems	1	2	3	4	5	6	7	8	9	10
Students Answers	A	A	B	B	C	B	D	D	A	A
Correct Answers	A	C	B	D	C	B	D	B	A	A

A) 56   B) 76   C) 66   D) 86

Q.10) Mr. Smith bought a package of 80 erasers for his students. He put an equal number of erasers in each of 22 bags. Which statement best describes the greatest number of erasers Mr. Smith could have put in each bag?

A) Each bag had 3 erasers, and 4 erasers were left over.

B) Each bag had 3 erasers, and 16 erasers were left over.

C) Each bag had 3 erasers, and 14 erasers were left over.

D) Each bag had 3 erasers, and 6 erasers were left over.

Q.11) The shape is of:

A) Triangular Prism   B) Pyramid   C) Cuboid   D) Cylinder

Q.12) Elida will use six different wires for a science project. The fractions represent the diameters of these wires in inches.

$$\frac{7}{16}, \frac{1}{2}, \frac{3}{8}, \frac{9}{32}, \frac{5}{16}, \frac{15}{32}$$

Which list shows the diameters of the wires in order from least to greatest?

(A) $\frac{1}{3}, \frac{3}{8}, \frac{7}{16}, \frac{5}{16}, \frac{15}{32}, \frac{9}{32}$

(B) $\frac{1}{2}, \frac{3}{8}, \frac{5}{16}, \frac{7}{16}, \frac{9}{32}, \frac{15}{32}$

(C) $\frac{9}{32}, \frac{15}{32}, \frac{5}{16}, \frac{7}{16}, \frac{3}{8}, \frac{1}{2}$

(D) $\frac{9}{32}, \frac{5}{16}, \frac{3}{8}, \frac{7}{16}, \frac{15}{32}, \frac{1}{3}$

Q.13) There are 90 girls and 60 boys in the sixth grade at a middle school. Of these students, 9 girls and 3 boys write left-handed. What percentage of the sixth graders at this middle school write left-handed?

(A) 15% (B) 8% (C) 5% (D) 10%

Q.14) A housepainter mixed 5 gal of blue paint with every 9 gal of yellow paint in order to make a green paint. Which ratio of gallons of blue paint to gallons of yellow paint will make the same shade of green paint?

(A) 27:15 (B) 10:45 (C) 30:54 (D) 6:10

Q.15) A company spent 32% of its annual budget developing a new machine. What fraction of the company's budget was spent developing the new machine?

(A) 4/125 (B) 8/25 (C) 5/16 (D) 1/32

Q.16) A team of workers took 167.3 hours to complete a task. A smaller team of workers will complete the same task, but it will take them 1.25 times as long as it took the first team. Based on this information, which statement is true?

(A) The task will take the smaller team of workers 168.55 hours to complete, because 167.3 + 1.25 = 168.55

(B) The task will take the smaller team of workers 179.8 hours to complete, because 167.3 + 1.25 = 179.8

(C) The task will take the smaller team of workers 198.825 hours to complete, because 167.3 + 1.25 = 198.825

(D) The task will take the smaller team of workers 200.125 hours to complete, because 167.3 + 1.25 = 200.125

_____

Q.17) Which list shows the temperatures in order from coldest to warmest in degrees Fahrenheit?

(A) -10°F 8°F -5°F 0°F   (B) -5°F -10°F 0°F 8°F

(C) -10°F -5°F 0°F 8°F   (D) -0°F -5°F 8°F -10°F

_____

Q.18) Which statement about 3 multiplied by 2/3 must be true?

(A) The Product is between 3 & 4   (B) The Product is less than 2/3

(C) The Product is between 2/3 & 3   (D) The Product is greater than 4

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Q.19) Yvonne is researching the effect of education on annual income. A summary of her research is shown in the following table.

Effect of Education on Annual income

Level of Education	Annual Income (Dollars)
High School Diploma	33,904
Associate's Degree	40,820
Bachelor's Degree	55,432

Based on the data in the table, how much more does a person with an associate's degree earn than a person with only a high school diploma over 10years?

A $6,916   B $74,724   C $747,240   D $69,160

Q.20) Several students voted on their favorite sports activities.

Eight students voted for basketball.   Three students voted for volleyball.
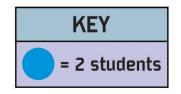
Seven students voted for baseball.   Four students voted for kickball.

Complete the picture graph below to show the data.

FAVORITE SPORT ACTIVITY

Activity	Number of Students
Basketball	
Volleyball	
Baseball	
Kickball	

KEY
● = 2 students

Which of the following is the correct entry?

A **Basketball** ●●●●

B **Volleyball** ●●●

C **Baseball** ●●●●●●

D **Kickball** ●●●●

_____

Q.21) The dot plot shows the number of touchdowns a football team scored in 10 games last season.

Which statement best describes the data shown in the dot plot?

A The peak of the data is at 5.

B The data are clustered from 0 to 2.

C The data distribution has no gaps.

D The data distribution is symmetrical.

_____

Q.22) There were 80 adults and 20 children at a school play. The school collected Rs.8 for each adult's ticket and Rs.3 for each child's ticket.
The school donated Rs.125 of the money from tickets to a local hospital and used the remaining money to buy supplies for next year's school play.

How much money does the school have to buy supplies for next year's play?
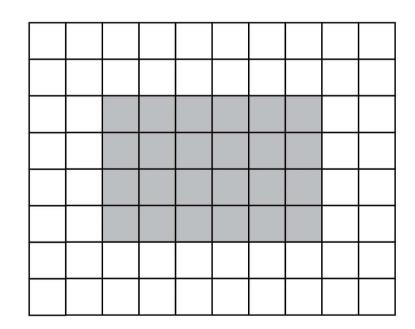
A Rs.475   B Rs.675   C Rs.775   D Rs.575

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Q.23) The first number in a number pattern Is 28. The pattern rule is to add 14 to get the next number in the pattern. If the pattern continues, which statement is true?
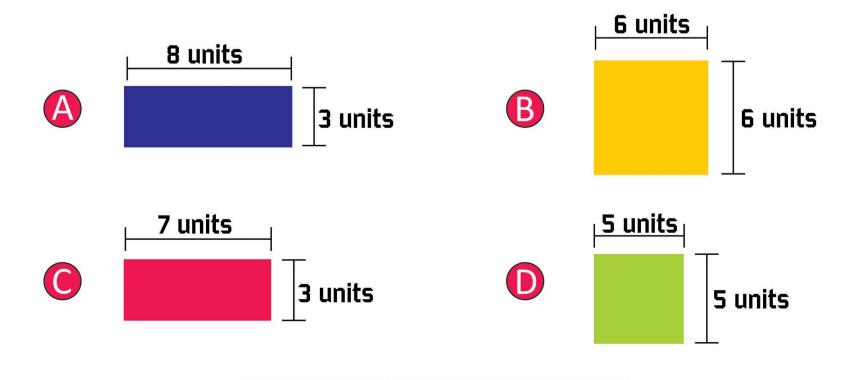
(A) All the numbers in the pattern can be divided equally by 10.

(B) All the numbers in the pattern can be divided equally by 4.

(C) All the numbers in the pattern can be divided equally by 8.

(D) All the numbers in the pattern can be divided equally by 7.

Q.24) Asif made a poster for his science project. The shaded part of the figure below shows the are of his poster.

KEY
☐ = 1 square unit

Which figure has the same are as the poster?

(A) 8 units × 3 units

(B) 6 units × 6 units

(C) 7 units × 3 units

(D) 5 units × 5 units

Q.25) Students voted on a name for their school softball team. The table below lists the number of votes each team received.

TEAM NAME VOTES

Name	Number of Votes
Bears	12
Comets	36
Hawks	1
Stars	3
Wolves	1

Which team name received 3 times as many votes as "Comets"?
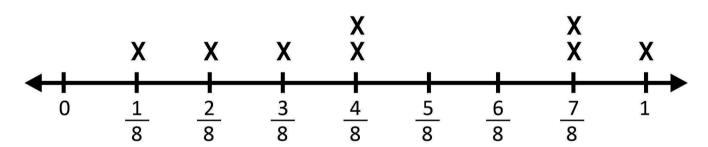
(A) Wolves   (B) Bears   (C) Hawks   (D) Stars

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Q.26) The line plot below shows the lengths of string Mario used for an art project.

LENGTHS OF STRING

What was the total length, in feet, of string that Mario used?

(A) $\frac{25}{8}$ (B) $\frac{36}{8}$ (C) $\frac{48}{8}$ (D) $\frac{64}{8}$

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Q.27) When a certain number is divided by 4, the answer is 160 with a remainder of 2. What Is the number?

(A) 38   (B) 42   (C) 642   (D) 638

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Q.28) Adam, Clara and Deena painted a tree house.

Adam spent 2 times as many minutes painting as Clara.
Clara spent 30 more minutes painting than Deena.
Deena spent 45 minutes painting.

What is the total number of minutes that Adam, Clara and Deena spent painting the tree house?

(A) Adam 2 hours 30 minutes, Clara 1 hour 15 minutes and Deena 45 minutes

(B) Adam 1 hours 30 minutes, Clara 2 hour 15 minutes and Deena 45 minutes

(C) Adam 1 hours, Clara 30 minutes and Deena 15 minutes

(D) Adam 2 hours, Clara 30 minutes and Deena 15 minutes

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Q.29) Pax wants to make fruit punch for a party using the recipe below.

Fruit Punch
1.25 L orange juice
2.5 L cranberry juice
1 L ginger ale

He will make three time the amount of fruit punch listed in the recipe.
What is the total amount of fruit punch, in liters, that Pax will make?

(A) 4.53   (B) 4.75   (C) 12.90   (D) 14.25

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Q.30) The value of the digit 5 in 24,513 is how many times the value of the digit 5 in 357?

(A) 100   (B) 1,000   (C) 10,000   (D) 10

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THE END

Vibrant Youngsters Competitions

Q. No.	Answer		Q. No.	Answer	
1	A ● C D		16	A B C ●	
2	● B C D		17	A B ● D	
3	A B ● D		18	A B ● D	
4	A B C ●		19	A B C ●	
5	A B C ●		20	● B C D	
6	A B ● D		21	A ● C D	
7	A B C ●		22	A B C ●	
8	A B C ●		23	A B C ●	
9	A ● C D		24	● B C D	
10	A B ● D		25	● B C D	
11	● B C D		26	A ● C D	
12	A B C ●		27	A B ● D	
13	A ● C D		28	● B C D	
14	A B ● D		29	A B C ●	
15	A ● C D		30	A B C ●	

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