CONTESTANT ID #: _____

GRADE LEVEL :_____

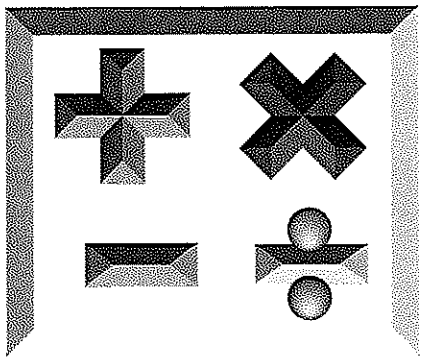
Place Contestant ID label here BEFORE Contest Begins

PSIA
Private Schools Interscholastic Association

Mathematics

State Contest

Grades 2-3



2023

FINAL SCORE: _____

(Please do not open test until the signal is given to begin.)

Directions: Choose the best answer for each of the following problems.

1. $53 + 39 =$

A. 82 **B.** 72 **C.** 102 **D.** 92

2. $74 - 28 =$

A. 52 **B.** 56 **C.** 46 **D.** 42

3. $320 - 136 =$

A. 456 **B.** 466 **C.** 194 **D.** 184

4. What digit is in the hundred's place of 8563?

A. 5 **B.** 3 **C.** 8 **D.** 6

5. 46 = _____ (Roman numerals)

A. XLIV **B.** XCIV **C.** XLVI **D.** XCVI

6. Maya had thirteen paper clips. She picked up forty-eight more paper clips. How many paper clips does she have now?

A. 35 **B.** 25 **C.** 61 **D.** 71

7. Bobby sold 82 tacos on Tuesday, 94 tacos on Wednesday, and 76 tacos on Thursday. His goal for Tuesday through Friday was to sell 345 tacos. How many tacos should he sell on Friday to meet his goal?

A. 87 **B.** 93 **C.** 83 **D.** 97

8. What single digit goes in each box to make the statement true? $\square 4 \square + \square \square 4 + \square 1 \square = 2238$

A. 7 **B.** 2 **C.** 5 **D.** 6

9. How many minutes pass from 5:34pm to 6:18pm, on the same day?

A. 84 **B.** 36 **C.** 26 **D.** 44

10. Which pair of numbers are the same distance away from 63 on the number line?

A. 47 and 55 **B.** 43 and 93 **C.** 44 and 82 **D.** 51 and 77

11. $34 \times 8 =$

A. 372 **B.** 362 **C.** 272 **D.** 262

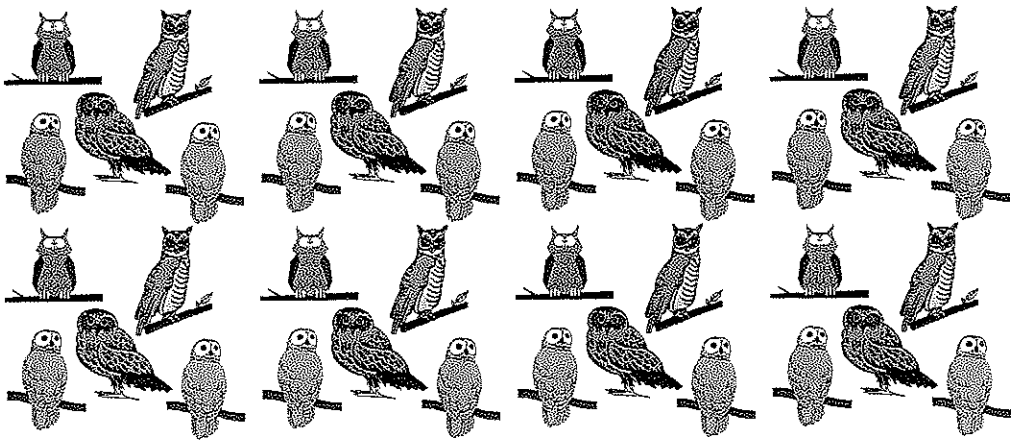
12. Which of the following products is the largest?

A. 13×6 **B.** 17×3 **C.** 18×5 **D.** 16×4

13. Autumn ordered 17 cases of water. Each case has 32 bottles. How many total bottles of water did she order?

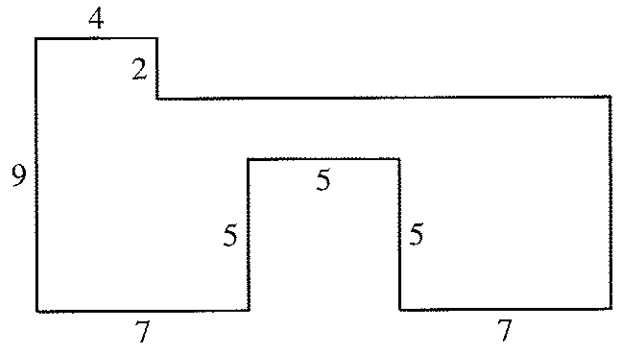
A. 544 **B.** 584 **C.** 624 **D.** 49

14. How many total owls are shown?



A. 45 **B.** 30 **C.** 48 **D.** 40

15. Find the area.



A. 154 **B.** 116 **C.** 100 **D.** 132

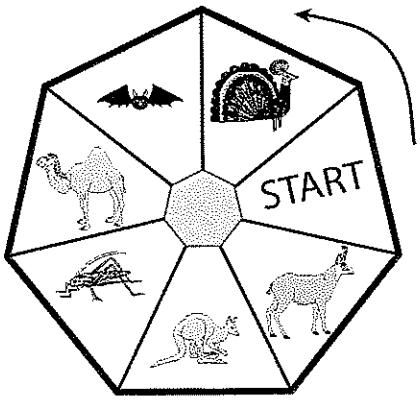
16. What number goes in the box? $576 + 312 - \square = 499$

A. 289 **B.** 279 **C.** 389 **D.** 379

17. If September 27th falls on a Thursday, what day of the week will October 21st fall on, same year?

A. Tuesday **B.** Saturday **C.** Monday **D.** Sunday

18. In a game, players move the number of spaces rolled on a die. Players move counter-clockwise around the board (see arrow), starting at START. What space will the player land on after rolling 2, 3, 1, 6, 6, 4, 5, 2, 3, 2, 2, 1, and 6?



A. bat

B. peacock

C. camel

D. kangaroo

19. Shakir has 9 half-dollars, 12 quarters, and 17 nickels. How much does he have in total?

A. \$8.35 **B.** \$9.20 **C.** \$7.85 **D.** \$10.30

20. $(47 \times 16) + (47 \times 18) + (27 \times 47) = 47 \times$ what number?

A. 81 **B.** 61 **C.** 74 **D.** 54

21. $235 \div 5 =$

A. 49 **B.** 47 **C.** 43 **D.** 41

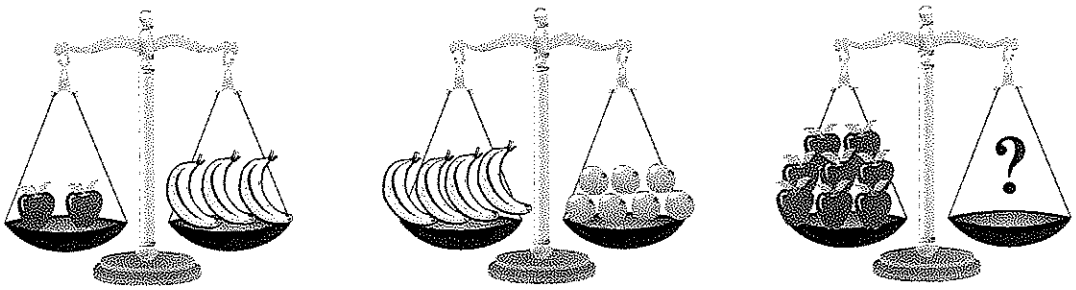
22. Jolie has 96 markers. She places them in bags with 8 markers per bag. How many bags does she need?

A. $96 \div 8$ **B.** $96 - 8$ **C.** 96×8 **D.** $96 + 8$

23. The numbers 2, 7, 5, and 6 are arranged to form two 2-digit numbers. What is the largest possible product that can result from multiplying the two 2-digit numbers together?

A. 4650 **B.** 4680 **C.** 4720 **D.** 4750

24. On the scales, there are apples, bananas, and oranges. How many oranges should be placed on the last scale to balance it?



A. 35 **B.** 28 **C.** 14 **D.** 21

25. $5 \times 6 \times 8 \div 10 =$

A. 18 **B.** 12 **C.** 24 **D.** 48

26. Reduce $\frac{15}{80}$ to lowest terms.

A. $\frac{3}{16}$ **B.** $\frac{5}{8}$ **C.** $\frac{3}{8}$ **D.** $\frac{5}{16}$

27. $19.86 - 14.7 =$

A. 4.79 **B.** 5.79 **C.** 4.16 **D.** 5.16

28. What is the five-twelfths of 36?

A. 8 **B.** 18 **C.** 20 **D.** 15

29. Sasha's normal body temperature is 98.6° Fahrenheit. Today, she was running a fever of 101.3° Fahrenheit. How much higher was her temperature today than normal?

A. 2.7° **B.** 3.7° **C.** 2.3° **D.** 3.3°

30. $31 + 32 + 33 + 34 + 35 = 11 \times$ what number?

A. 5 **B.** 25 **C.** 35 **D.** 15

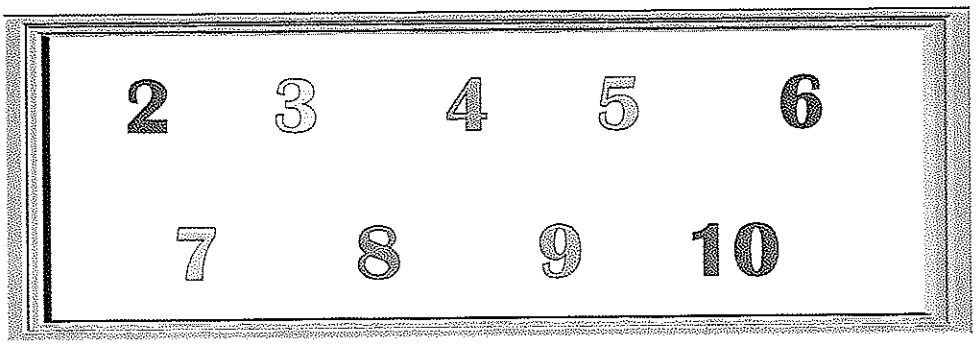
31. What is the perimeter of a rectangle whose length is 12 inches and width is 11 inches?

A. 132 inches **B.** 66 inches **C.** 46 inches **D.** 36 inches

32. Callie has $20.00. She wants to buy cookies. Each bag of cookies cost $2.00. She wants to have $8.00 left after buying her cookies. How many bags of cookies can she buy?

A. 4 **B.** 5 **C.** 6 **D.** 8

33. How many of the numbers shown in the box are divisors of 288?



A. 6 **B.** 4 **C.** 7 **D.** 5

34. A class has 3 boys and 12 girls. One student is chosen as line leader for the day. What term best describes the probability that the line leader is a girl?

A. probable **B.** certain **C.** impossible **D.** unlikely

35. An empty sand box is 8 inches by 8 inches by 2 inches deep. How much sand is needed to fill the box?

A. 108 cubic inches **B.** 116 cubic inches **C.** 128 cubic inches **D.** 144 cubic inches

36. How many 5-letter codes can be made from the letters A, B, and C, where each letter can be used over and over?

A. 125 **B.** 216 **C.** 300 **D.** 243

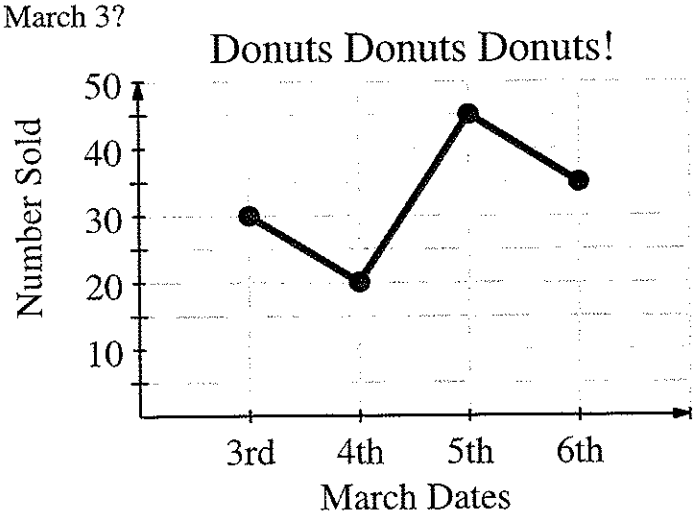
37. What is the smallest natural number that is a multiple of both 16 and 18?

A. 186 **B.** 80 **C.** 72 **D.** 144

38. Which fraction is the smallest?

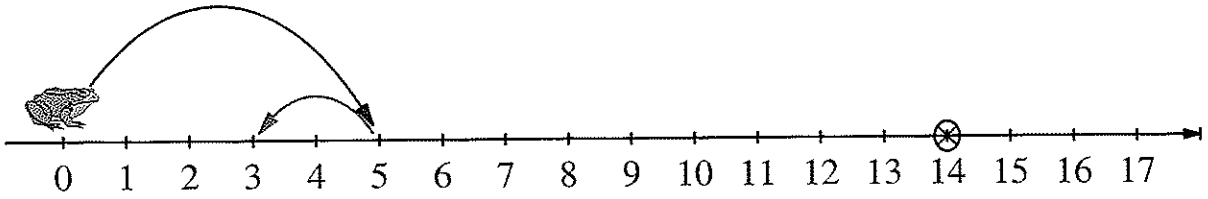
A. $\frac{4}{7}$ **B.** $\frac{3}{5}$ **C.** $\frac{2}{3}$ **D.** $\frac{5}{12}$

39. The number of donuts sold each day is shown in the line graph. How many more donuts were sold on March 5 than on March 3?



A. 20 **B.** 30 **C.** 25 **D.** 15

40. A frog can only leap 5 spaces forward or 2 spaces back. The frog starts at 0. What is the least number of leaps needed for the frog to reach 14?



A. 9 **B.** 8 **C.** 7 **D.** 6

Mathematics Grades 2-3

State Contest

Contestant Answer Sheet

GRADERS: *Write scores and initial.*

Score 1: _____ Score 3: _____

Score 2: _____ FINAL: _____

Contestant ID: _____ Grade Level: _____

INSTRUCTIONS: Place the PRINTED CAPITAL letter of each answer choice (A, B, C, or D) in the blank corresponding to the test item number. SCORING: +5 for each correct answer; –2 for each incorrect answer; no deduction for skipped or unanswered items. Visible erasures and mark-outs constitute a 2-point deduction ONLY if a correct answer is not written in the answer space.

1. _____	16. _____	31. _____
2. _____	17. _____	32. _____
3. _____	18. _____	33. _____
4. _____	19. _____	34. _____
5. _____	20. _____	35. _____
6. _____	21. _____	36. _____
7. _____	22. _____	37. _____
8. _____	23. _____	38. _____
9. _____	24. _____	39. _____
10. _____	25. _____	40. _____
11. _____	26. _____	
12. _____	27. _____	
13. _____	28. _____	
14. _____	29. _____	
15. _____	30. _____	

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ANSWER KEY

State 2023

REMINDERS: PRINTED CAPITAL letters only. SCORING: +5 for each correct answer; –2 for each incorrect answer; no deduction for skipped or unanswered items. Visible erasures and mark-outs constitute a 2-point deduction ONLY if a correct answer is not written in the answer space.

1. **D**	16. **C**	31. **C**
2. **C**	17. **D**	32. **C**
3. **D**	18. **B**	33. **A**
4. **A**	19. **A**	34. **A**
5. **C**	20. **B**	35. **C**
6. **C**	21. **B**	36. **D**
7. **B**	22. **A**	37. **D**
8. **A**	23. **B**	38. **D**
9. **D**	24. **D**	39. **D**
10. **C**	25. **C**	40. **C**
11. **C**	26. **A**	
12. **C**	27. **D**	
13. **A**	28. **D**	
14. **D**	29. **A**	
15. **B**	30. **D**	