PSIA
Private Schools
Interscholastic
Association

Mathematics
STATE Contest
Grades 2/3
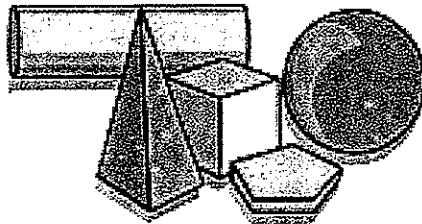
2017

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. $49 + 37 =$

   A. 86   B. 76   C. 88   D. 78

2. $93 - 44 =$

   A. 41   B. 51   C. 49   D. 59

3. $85 + 75 + 65 + 55 =$

   A. 280   B. 285   C. 290   D. 295

4. Round the sum of 188 and 231 to the nearest ten's place.

   A. 410   B. 400   C. 430   D. 420

5. $900 - 418 - 327 =$

   A. 145   B. 155   C. 165   D. 175

6. Elizabeth has 37 coins. Jeanette has 48 coins. Nikki has 29 coins. Elizabeth and Jeanette put their coins in an empty jar. Nikki puts enough coins in the jar to make 100 coins. How many coins does Nikki have left?

   A. 13   B. 14   C. 15   D. 16

7. $84 + 67 + 73 - 4 - 7 - 3 =$

   A. 210   **B.** 202   **C.** 220   **D.** 201

8. What single digit goes in both boxes?

   $$\boxed{}37 + 1\boxed{}4 = 801$$

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

9. Elton is 4 feet 5 inches tall. Nolan is 6 feet 3 inches tall. How much taller is Nolan than Elton?

   A. 1 foot 10 inches   **B.** 1 foot 8 inches   **C.** 2 feet   **D.** 2 feet 2 inches

10. $31.4 + 5.68 =$

   A. 36.78   **B.** 37.08   **C.** 37.28   **D.** 88.2

11. $13 \times 6 =$

   A. 78   **B.** 68   **C.** 72   **D.** 82
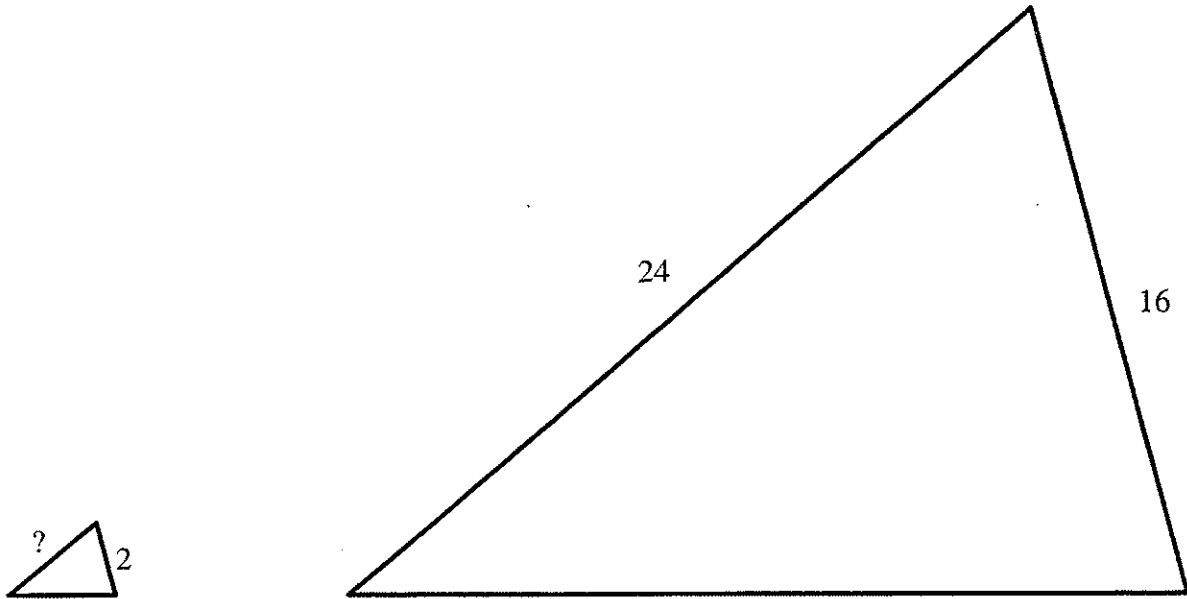
12. Flora planted 15 rows of tulips. Each row has 16 tulips. How many total tulips did she plant?

   A. 240   **B.** 200   **C.** 180   **D.** 280

13. What is the smallest multiple of 7 that is larger than 300?

    A. 304   **B.** 302   **C.** 301   **D.** 305

14. What is the next number in the pattern?   14, 16, 22, 32, 46, 64, …

    A. 92   **B.** 90   **C.** 88   **D.** 86

15. Which unit could be used to measure the amount of milk to use in a recipe when cooking scalloped potatoes?

    A. acre   **B.** bushel   **C.** cups   **D.** millimeters

16. Elsie works at a factory. She earns $22.00 per hour. Her time card for the week is shown below. She takes 30 minutes each day for lunch (unpaid). How much did she earn this week?

	In	Out
Monday	8:00am	3:00pm
Tuesday	8:30am	5:00pm
Wednesday	9:00am	1:00pm
Thursday	8:00am	5:00pm
Friday	9:00am	2:30pm

    A. $738   **B.** $693   **C.** $748   **D.** $713

17. A car is traveling at 48 miles per hour. How long does it take to travel 168 miles?

    A. 2.5 hours   **B.** 3.5 hours   **C.** 2.75 hours   **D.** 3.25 hours

18. The two triangles shown are similar. What is the length of the missing side?

    A. 6   **B.** 4   **C.** 3   **D.** 2

19. Mackenzie surveyed her school to find out what sandwich each student likes best. How many more students like ham and cheese better than turkey?

Ham and Cheese	⳾⳾⳾ l
Peanut Butter and Jelly	⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ lll
Salami	⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ll
Turkey	⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ ⳾⳾⳾ llll

A. 28   B. 24   C. 48   D. 52

20. $56 \div 7 =$

A. 7   B. 8   C. 9   D. 11

21. Which fraction is equivalent to $\frac{5}{9}$?

A. $\frac{25}{45}$ B. $\frac{20}{38}$ C. $\frac{15}{36}$ D. $\frac{30}{56}$

22. Which of the following numbers is not divisible by 3?

A. 102   B. 85   C. 78   D. 93

23. What fraction is represented by the dot on the number line?

$$\underset{0}{\vdash}\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!+\!\!\underset{1}{\dashv}$$
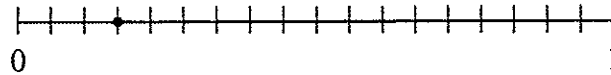
    A. $\dfrac{1}{8}$ **B.** $\dfrac{1}{7}$ **C.** $\dfrac{1}{6}$ **D.** $\dfrac{1}{5}$

24. What number goes in the box? $48 \times \boxed{} = 12 \times 16$

    A. 4   **B.** 6   **C.** 2   **D.** 8

25. Layla is going to bag the apples shown below. Each bag will have 5 apples. How many bags will she need?
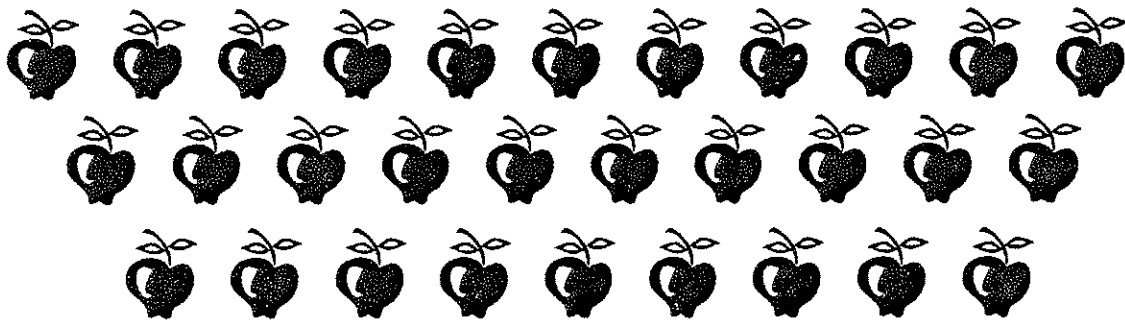
    A. 8   **B.** 7   **C.** 6   **D.** 5

26. How many centimeters are equivalent to 40 meters?

    A. 400   **B.** 4000   **C.** 40,000   **D.** 400,000

27. How full is the bottle?

A. $\dfrac{7}{8}$ B. $\dfrac{5}{6}$ C. $\dfrac{11}{13}$ D. $\dfrac{9}{10}$

28. Kyra had 48 grapes. She gave $\dfrac{1}{6}$ of her grapes to Victor. Of the remaining grapes, she gave $\dfrac{1}{5}$ of them to Bertram. Of the remaining grapes, she then gave $\dfrac{1}{4}$ of them to Mason. Which of the following statements is true?

A. Victor received fewer grapes than Bertram.

B. Bertram received fewer grapes than Mason.

C. Mason received fewer grapes than Victor.

D. Victor, Bertram, and Mason each received the same number of grapes.

29. What Roman numeral goes in the box?

$$XXI \times \boxed{} = LXXXIV$$

A. VII   B. III   C. IV   D. VI

30. How many vertices does an icosahedron have?

A. 8   B. 6   C. 12   D. 20

31. Leo, Romeo, and Juan each brought a different colored ball to school. Leo did not bring the red ball. Romeo did not bring the yellow ball. Neither Juan nor Leo brought the green ball. What color ball did Juan bring?

A. red   B. yellow   C. green   D. Cannot be determined

32. In a foreign country, money only comes in bills that are worth $6 or $7. What is the largest amount of money that cannot be formed in this country?

A. 33   B. 31   C. 29   D. 27
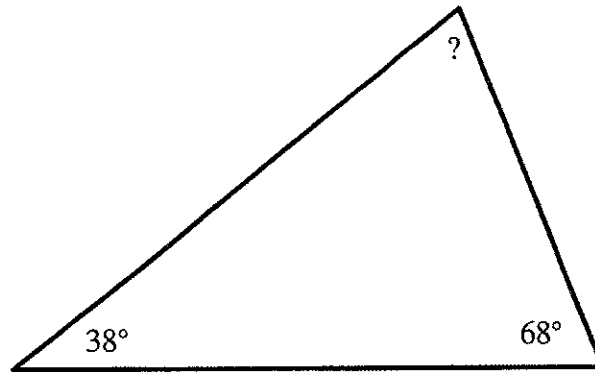
33. What is true about the product 231×41?

A. It is greater than 9200.

B. It is less than 9200.

C. It is equal to 9200.

D. Cannot be determined

34. Find the missing angle in the triangle below.

A. 72°   B. 74°   C. 82°   D. 84°

35. Dax, Denny, Diana, Doug, and Duane want to sit in 5 chairs in a row. Dax and Diana insist on sitting on the ends of the row. How many different ways can they be seated?

A. 24   B. 120   C. 6   D. 12

36. Joachim has a 9 feet long wooden dowel rod. He needs to cut the rod into 4 inch pieces. How many pieces will he have after cutting?

A. 27   B. 36   C. 18   D. 24

37. Which sign goes in the box to make the statement true? $\dfrac{2}{5} \ \square \ \dfrac{4}{9}$

A. >   B. <   C. =   D. Cannot be determined

38. The sum of two numbers is 57 and their difference is 19. What is the larger of the two numbers?

    A. 41   **B.** 40   **C.** 39   **D.** 38

39. Marcie has a certain number of marbles. When she distributes them evenly into 7 jars, she has 5 left over. When she distributes them into 8 jars, she has 6 left over. When she distributes them into 9 jars, she has 2 left over. Which of the following could be the number of marbles she has?

    A. 145   **B.** 124   **C.** 110   **D.** 54

40. Astra works 38 hours per week, making $9.89 per hour. Approximately how many weeks must she work in order to save up $3000?

    A. 5   **B.** 6   **C.** 7   **D.** 8

PSIA Mathematics Grade 2/3 Contest
Student Answer Sheet

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 is taken 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. _____   **SCORE / INITIALS:**

12. _____   27. _____   Grader #1: _____ _____

13. _____   28. _____   Grader #2: _____ _____

14. _____   29. _____   Grader #3: _____ _____

15. _____   30. _____   **Official Score:** _____

Contest Director ONLY: Match school & name AFTER tests are scored:_____

PSIA Mathematics Contest
Grades 2/3
STATE — 2017
Answer Key

Scoring: +5 for each correct answer; -2 for each incorrect answer; no points are deducted for skipped or unanswered items. Deduct 2 points for erasures and mark-outs that do not result in a correct answer.

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