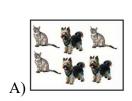
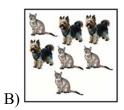
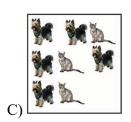
LEVELS 1 AND 2

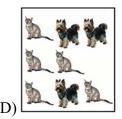
SAMPLE QUESTION FOR 3 POINTS

In which picture are there 2 more cats than dogs?









SAMPLE QUESTION FOR 4 POINTS

Elma took 2 candy bars to school. First, she traded each of them for 4 apples, and then she traded each of the apples for 3 mandarin oranges. How many mandarin oranges did she have after all the trading?

A)
$$2 + 4 + 3$$

B)
$$2 \times 4 + 3$$

B)
$$2 \times 4 + 3$$
 C) $2 + 4 \times 3$ D) $2 \times 4 \times 3$

D)
$$2 \times 4 \times 3$$

SAMPLE QUESTION FOR 5 POINTS

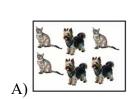
There are equal numbers of cats, dogs, and chickens in the yard. Together, they have 50 legs. How many cats are there in the yard?

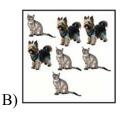
- A) 4
- B) 6
- C) 5
- D) 7

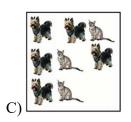
LEVELS 1 AND 2 ANSWERS

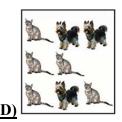
SAMPLE QUESTION FOR 3 POINTS

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SAMPLE QUESTION FOR 4 POINTS

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A)
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D)
$$2 \times 4 \times 3$$

SAMPLE QUESTION FOR 5 POINTS

There are equal numbers of cats, dogs, and chickens in the yard. Together, they have 50 legs. How many cats are there in the yard?

- A) 4
- B) 6
- <u>C) 5</u>
- D) 7

LEVELS 3 AND 4

SAMPLE QUESTION FOR 3 POINTS

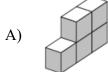
An adult ticket to the zoo costs \$4, and a ticket for a child is \$1 cheaper. On a certain Sunday, a father went to the zoo with his two children. How much did they have to pay for the tickets?

- A) \$5
- B) \$6
- C) \$7
- D) \$10
- E) \$12

SAMPLE QUESTION FOR 4 POINTS

Each of the figures A to E shown below is made up of 5 blocks. Which of the figures can you not get from the figure on the right if you move exactly one cube?





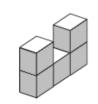
B)



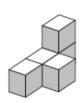
C)



D)



E)



SAMPLE QUESTION FOR 5 POINTS

Right now, Mary is five times as old as her sister Li. In 6 years, she will be twice as old as Li. How old will Mary be in 10 years?

- A) 15
- B) 20
- C) 25
- D) 30
- E) 35

LEVELS 3 AND 4 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

An adult ticket to the zoo costs \$4, and a ticket for a child is \$1 cheaper. On a certain Sunday, a father went to the zoo with his two children. How much did they have to pay for the tickets?

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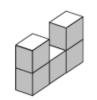
B)



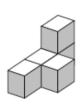
C)



<u>D)</u>



E)



SAMPLE QUESTION FOR 5 POINTS

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- A) 15
- <u>B) 20</u>
- C) 25
- D) 30
- E) 35

LEVELS 5 AND 6

SAMPLE QUESTION FOR 3 POINTS

Which number is the smallest?

A)
$$2 + 0 + 0 + 8$$

B)
$$200 \div 8$$

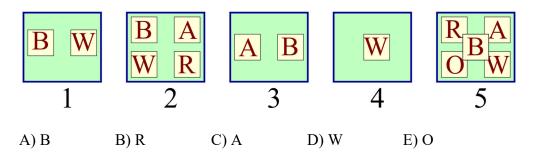
C)
$$2 \times 0 \times 0 \times 8$$
 D) $200 - 8$ E) $8 + 0 + 0 - 2$

D)
$$200 - 8$$

E)
$$8 + 0 + 0 - 2$$

SAMPLE QUESTION FOR 4 POINTS

There are five boxes as shown in the picture, and each one contains cards with different letters. Paul wants to remove cards from the boxes in such a way that there is only one card left in each box, and that every box has a card with a different letter in it. Which card will be left in box 5?



SAMPLE QUESTION FOR 5 POINTS

A train traveling at a steady speed crossed a bridge which was 200 m long in 1 minute. The whole train passed a person standing on the bridge in 12 seconds. How long was the train?

- A) 100 m
- B) 60 m
- C) 50 m
- D) 40 m
- E) 75 m

LEVELS 5 AND 6 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

Which number is the smallest?

A)
$$2+0+0+8$$

B)
$$200 \div 8$$

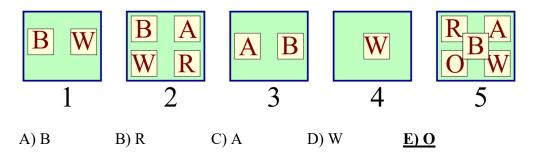
C)
$$2 \times 0 \times 0 \times 8$$

D)
$$200 - 8$$

D)
$$200 - 8$$
 E) $8 + 0 + 0 - 2$

SAMPLE QUESTION FOR 4 POINTS

There are five boxes as shown in the picture, and each one contains cards with different letters. Paul wants to remove cards from the boxes in such a way that there is only one card left in each box, and that every box has a card with a different letter in it. Which card will be left in box 5?



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- A) 100 m
- B) 60 m
- C) 50 m
- D) 40 m
- E) 75 m

LEVELS 7 AND 8

SAMPLE QUESTION FOR 3 POINTS

The numbers 2, 3, 4, and one more number are written in the cells of a 2×2 table. It is known that the sum of the numbers in the first row is equal to 9, and the sum of the numbers in the second row is equal to 6. The unknown number is:

A) 4

- B) 5
- C) 6
- D) 7
- E) 8

SAMPLE QUESTION FOR 4 POINTS

How many squares can be drawn by joining the dots with line segments?

• • •

- A) 2
- B) 3
- C) 4
- D) 5
- E) 6
- • •

SAMPLE QUESTION FOR 5 POINTS

In the equation KAN - GAR = OO each letter represents a certain digit (different letters represent different digits, the same letters represents the digits). Find the largest possible value of the number KAN.

- A) 987
- B) 876
- C) 865
- D) 864
- E) 785

LEVELS 7 AND 8 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

The numbers 2, 3, 4, and one more number are written in the cells of a 2×2 table. It is known that the sum of the numbers in the first row is equal to 9, and the sum of the numbers in the second row is equal to 6. The unknown number is:



- A) 4
- B) 5
- <u>C) 6</u>
- D) 7
- E) 8

SAMPLE QUESTION FOR 4 POINTS

How many squares can be drawn by joining the dots with line segments?

• • •

- A) 2
- B) 3
- <u>C) 4</u>
- D) 5
- E) 6
- •

SAMPLE QUESTION FOR 5 POINTS

In the equation KAN - GAR = OO each letter represents a certain digit (different letters represent different digits, the same letters represents the digits). Find the largest possible value of the number KAN.

- A) 987
- B) 876
- C) 865
- D) 864
- E) 785

LEVELS 9 AND 10

SAMPLE QUESTION FOR 3 POINTS

How many of the following expressions have a value different from 6?

$$2 - (-4)$$

$$(-2) \times (-3)$$
,

$$2 - 8$$
,

$$0 - (-6)$$
,

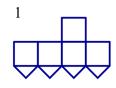
$$2-(-4)$$
, $(-2)\times(-3)$, $2-8$, $0-(-6)$, $(-12)\div(-2)$

A) 0

SAMPLE QUESTION FOR 4 POINTS

Imagine that the cube in the diagram is cut open along the dotted lines and unfolded. Two of the given configurations are impossible. They are:

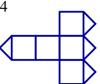












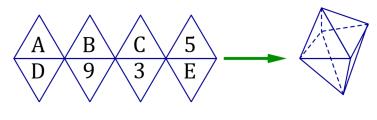


A) 1 and 3

- B) 1 and 5
- C) 3 and 4
- D) 3 and 5
- E) 2 and 4

SAMPLE QUESTION FOR 5 POINTS

A configuration of 8 equilateral triangles may be glued together to form a regular octahedron, as shown. A magical octahedron is obtained by replacing letters A, B, C, D, E with numbers 2, 4, 6, 7, 8, each letter with a different number and not necessarily in that order, in such a way that the sum of the values of the four faces adjacent to any one vertex is always the same. In a magical octahedron the value of B + D will be:



- A) 6
- B) 7
- C) 8
- D) 9
- E) 10

LEVELS 9 AND 10 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

How many of the following expressions have a value different from 6?

$$2 - (-4)$$

$$(-2) \times (-3)$$
,

$$2 - 8$$
,

$$0 - (-6)$$
,

$$2-(-4)$$
, $(-2)\times(-3)$, $2-8$, $0-(-6)$, $(-12)\div(-2)$

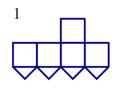
A) 0

B) 1 C) 2 D) 4 E) 5

SAMPLE QUESTION FOR 4 POINTS

Imagine that the cube in the diagram is cut open along the dotted lines and unfolded. Two of the given configurations are impossible. They are:















A) 1 and 3

B) 1 and 5

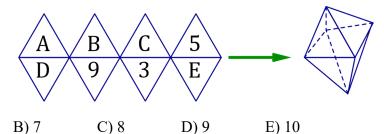
C) 3 and 4

D) 3 and 5

E) 2 and 4

SAMPLE QUESTION FOR 5 POINTS

A configuration of 8 equilateral triangles may be glued together to form a regular octahedron, as shown. A magical octahedron is obtained by replacing letters A, B, C, D, E with numbers 2, 4, 6, 7, 8, each letter with a different number and not necessarily in that order, in such a way that the sum of the values of the four faces adjacent to any one vertex is always the same. In a magical octahedron the value of B + D will be:

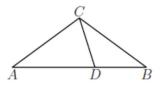


A) 6

LEVELS 11 AND 12

SAMPLE QUESTION FOR 3 POINTS

Given an isosceles triangle $\triangle ABC$, where AC = BC, and point D on the side AB such that AD = AC and DB = DC, what is the measure of the angle $\angle ACB$?



- A) 98°
- B) 100°
- C) 104°
- D) 108°
- E) 110°

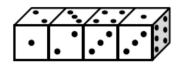
SAMPLE QUESTION FOR 4 POINTS

How many four digit numbers are divisible by 3, have the digit 2 in the thousands place, and have the digit 8 in the ones place?

- A) 34
- B) 30
- C) 19
- D) 20
- E) 33

SAMPLE QUESTION FOR 5 POINTS

Four identical dice are arranged as shown. These dice are unlike standard dice in that the sum of the values on opposite faces does not need to equal seven. In this arrangement, what is the sum of the values of the six adjacent faces?

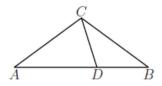


- A) 19
- B) 20
- C) 21
- D) 22
- E) 23

LEVELS 11 AND 12 ANSWERS

SAMPLE QUESTION FOR 3 POINTS

Given an isosceles triangle $\triangle ABC$, where AC = BC, and point D on the side AB such that AD = AC and DB = DC, what is the measure of the angle $\angle ACB$?



- A) 98°
- B) 100°
- C) 104°
- **D)** 108°
- E) 110°

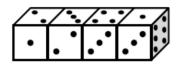
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