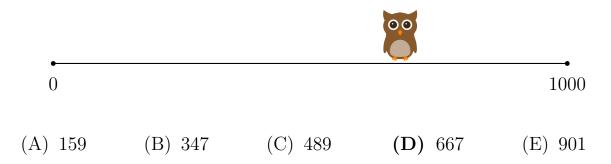


SOLUTIONS

Part A (4 points each)

- 1. What is the largest 4-digit number that you can make with the digits 2, 0, 2, 4?
 - (A) 2024
- (B) 2204
- (C) 2240
- (D) 4022
- (E) 4220
- 2. Which of the following numbers might the owl be sitting on?



- 3. Jack is trying to walk to his friend's house. His friend is goofy and gave him clues to find the house instead of telling him the street number. The clues are:
 - my house does not have a car parked in front of it;
 - my house does not have a tree.

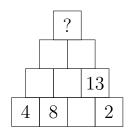
Which house belongs to Jack's friend?



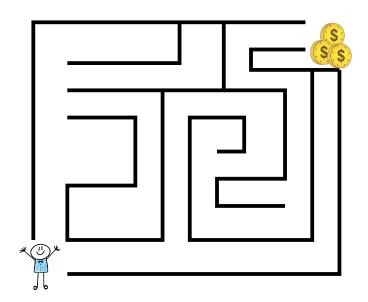
- (A) The black house.
- (B) The blue house.
- (C) The green house.

- (D) The yellow house.
- (E) The grey house.

4. In the number pyramid, every box is equal to the sum of the 2 boxes directly below it. What number should go in the top box?



- (A) 12
- (B) 32
- (C) 25
- (D) 63
- (E) 31
- 5. Ian is running through the maze to collect the magical coins, on the shortest path. He starts in the bottom left corner. How many more times did he turn right than left?



- (A) 4 more
- (B) 2 more
- (C) 3 more

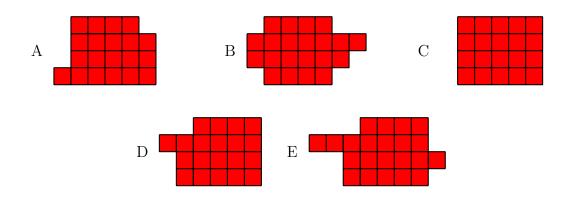
- (D) 1 more
- (E) 0 more

6. There is a sale at the store.



How many carrots can Renert Rabbit get with \$3.50?

- (A) 14
- (B) 17
- (C) 18
- (D) 20
- (E) 22
- 7. Ms. Joyce asked her students to use 1×1 squares to create shapes. Jack created 5 shapes, but only two of them have a perimeter of 20. Which ones are they?

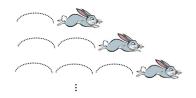


- (A) A and B
- (B) B and C
- (C) C and A

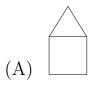
- (D) A and D
- (E) D and E

Part B (5 points each)

- 8. Which of these is equal to 2024?
 - (A) $2 \times 1000 + 0 \times 2 + 4$
 - (B) $20 \times 100 + 0 \times 24$
 - (C) $2 \times 1000 + 0 + 24$
 - (D) $200 \times 10 \times 0 \times 24$
 - (E) $200 \times 10 + 0 \times 24$
- 9. Ten rabbits are jumping in a show for Renert students. The first rabbit jumps once, the second rabbit jumps twice, the third rabbit jumps 3 times, and so on. What is the total number of jumps of all ten rabbits?



- (A) 10
- (B) 25
- (C) 45
- (D) 50
- (E) 55
- 10. Alice wants to trace the following images without lifting her pencil and without going over any of the lines more than once. However, it is impossible to do this for one of them which one?



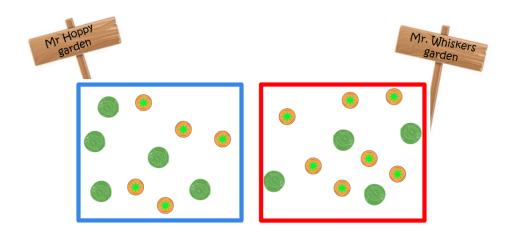








- 11. Andrey, Binny, Chase, and Dhiaan picked flowers. Andrey picked 4 more flowers than Binny. Chase picked 3 fewer flowers than Binny. Dhiaan picked 2 more flowers than Chase. How many more flowers did Andrey pick than Dhiaan?
 - (A) 5 (B) 9 (C) 3 (D) 1 (E) 6
- 12. In Renertville, a carrot costs 6 rabbit coins and a lettuce costs 11 rabbit coins. Mr. Whiskers and Mr. Hoppy sell all of their vegetables. Who gets more rabbit coins and by how much?



- (A) Mr. Hoppy gets 1 more rabbit coin than Mr. Whiskers.
- (B) Mr. Hoppy gets 2 more rabbit coins than Mr. Whiskers.
- (C) Mr. Whiskers gets 1 more rabbit coin than Mr. Hoppy.
- (D) Mr. Whiskers gets 2 more rabbit coins than Mr. Hoppy.
- (E) They get the same number of rabbit coins.
- 13. Ada was left in charge of some goats and some chickens. There were 25 heads and 72 feet among the animals. How many chickens were there?
 - (A) 13 (B) 12 (C) 11 **(D) 14** (E) 15

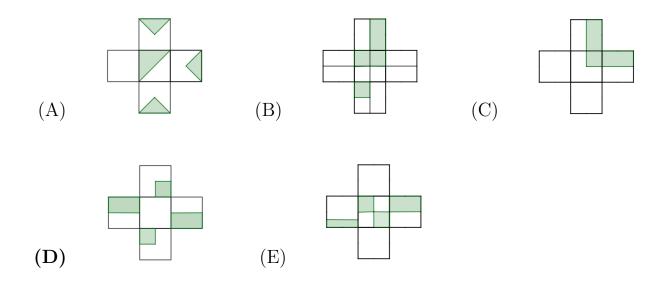
- 14. I am a number. The following are true:
 - I am a four-digit number.
 - None of my digits are repeated.
 - I am **not** an odd number.
 - My tens digit is 3 greater than my ones digit.
 - The hundreds digit is on the count by 3s.

What number am I?

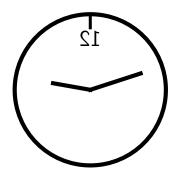
- (A) 5196
- (B) 8193
- (C) 3132
- (D) 1974
- (E) 4690

Part C (6 points each)

15. Ms. Doina asked her students to color a quarter of a cross. Below you see some of the crosses colored by her students, but one of the pictures is not correct. Which one?



16. Most of the numbers disappeared from this clock that you are seeing in the mirror. Can you estimate the time it shows?



- (A) 2:12
- (B) 2:48
- (C) 3:12
- (D) 3:52
- (E) 9:12
- 17. The year 2024 is a leap year since February has 29 days. Leap years occur every four years. If someone is born on February 29, 1980 how many times will they be able to celebrate their birthday on February 29 before the date February 7, 2024? (They did not celebrate a birthday on the day they were born.)
 - (A) 8
- (B) 9
- (C) 10
- (D) 11
- (E) 12
- 18. Four of the following images are of the same die, and one of them is of a different die. Which one is the image of the different die?

