

KANGAROO 2019

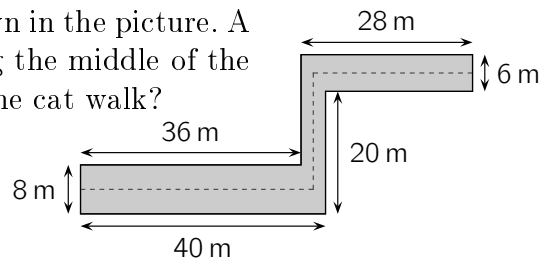


Time allowed: 75 minutes
Calculators are not permitted

Minor
3-4 grades

20. A hallway has the dimensions shown in the picture. A cat walks on the dashed line along the middle of the hallway. How many metres does the cat walk?

- A) 63 B) 68 C) 69
D) 71 E) 83



21. In the fairy orchard grows an apple tree and a pear tree. Every morning an apple falls down from the apple tree and two pears from the pear tree. Every noon two new apples grow on the apple tree and three new pears on the pear tree. On Sunday evening there were 3 apples and 5 pears on these trees. On which day of the week in the evening there will be 100 fruits together on both of these trees?

- A) On Monday B) On Tuesday C) On Wednesday D) On Thursday
E) On Friday

22. One of five children Alek, Bartek, Czarek, Darek and Edek has eaten a cookie. Alek says: "I haven't eaten a cookie." Bartek says: "I have eaten a cookie." Czarek says: "Edek hasn't eaten a cookie." Darek says: "I haven't eaten a cookie." Edek says: "Alek has eaten a cookie." Only one child lies. Who has eaten the cookie?

- A) Alek B) Bartek C) Czarek D) Darek E) Edek

23. Emil started to hang up towels using two pegs for each towel as shown in figure 1. He realised that he would have not enough pegs and began to hang up the towels as shown in figure 2. Overall, he hung up 35 towels and used 58 pegs. How many towels did Emil hang up in the way shown in figure 1?

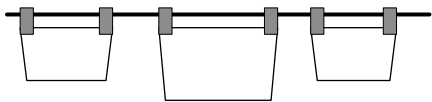


Figure 1

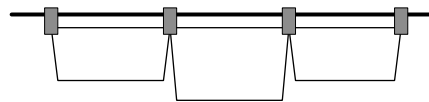
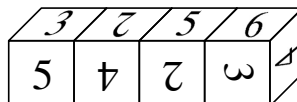


Figure 2

- A) 12 B) 13 C) 21 D) 22 E) 23

24. The faces of the cubes are numbered from 1 to 6. Four identical cubes were glued together as shown in the picture. What is the sum of numbers written on six glued faces?

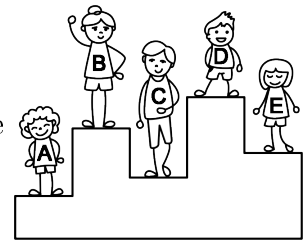


- A) 25 B) 18 C) 21 D) 22 E) 20

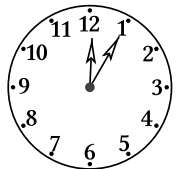
Questions for 3 points

1. Yesterday was Sunday. What day is tomorrow?
A) Tuesday B) Thursday C) Wednesday
D) Monday E) Saturday

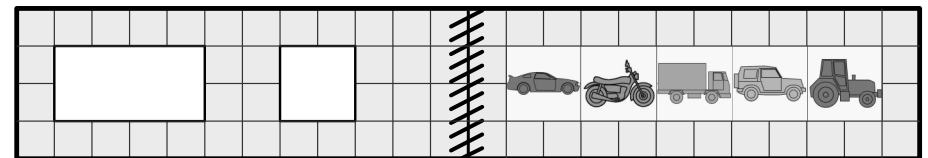
2. The higher the step on the podium, the higher the rank of the runner. Who finished third?
A) A B) B C) C D) D E) E



3. Asia came back home from a walk at the hour shown on the clock. The walk lasted for 38 minutes. At what time did Asia leave home for the walk?
A) At 11:33 B) At 12:43 C) At 11:38 D) At 11:27
E) At 12:38



4. There are two holes in the cover of a book. When the book is open, it looks like this:

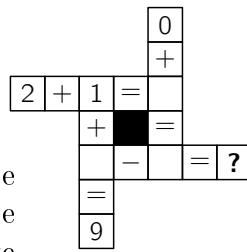


Which pictures does Olaf see through the holes when he closes the book?

- A) B) C)
D) E)

5. What number should replace the question mark when all the calculations are completed correctly?

- A) 4 B) 5 C) 6 D) 7 E) 8

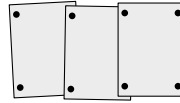


6. The red candle burns away within 2 hours and the white one within 1 hour. Two red candles and three white candles were lit simultaneously. How long does it take for these candles to burn out?

- A) 7 hours B) 5 hours C) 4 hours D) 3 hours E) 2 hours

7. Linda pinned up 3 photos in a row on a cork board using 8 pins. Peter wants to pin up 7 photos in the same way. How many pins does he need?

- A) 14 B) 16 C) 18 D) 22 E) 26



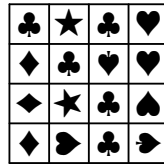
8. Asia and Nataika have the same number of nuts. Each of them has less than 12, and together they have more than 20. How many nuts does each of the girls have?

- A) 7 B) 8 C) 9 D) 10 E) 11

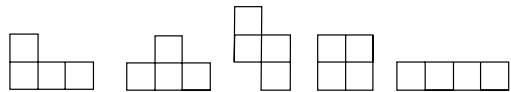
Questions for 4 points

9. Karina cuts out one piece like this from the sheet. Which piece can she get?

- A) B) C) D) E)



10. Dennis wants to remove one cell from the shape shown on the right. How many of the following shapes can he get?



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

11. Sara has 16 blue marbles. She can trade marbles in two ways: 3 blue marbles for 1 red marble or 2 red marbles for 5 green marbles. What is the maximum number of green marbles she can get?

- A) 5 B) 10 C) 13 D) 15 E) 20

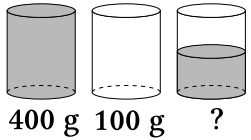
12. Steven wants to write each of the digits 1, 2, 3 and 9 in one of the boxes of the sum. He wants to get the largest possible answer. Which digit could he write instead of the question mark?

- A) Either 1 or 2 B) Either 1 or 3 C) Only 1 D) Only 2 E) Only 3

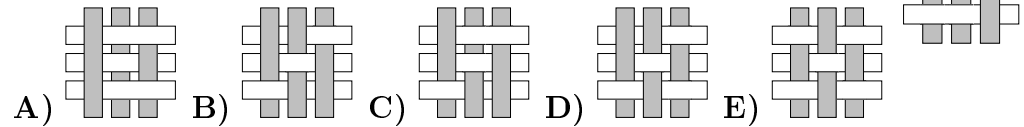


13. A full glass of water weighs 400 grams. An empty glass weighs 100 grams. How many grams does a half-full glass of water weigh?

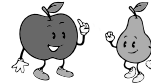
- A) 150 B) 200 C) 225 D) 250 E) 300



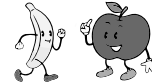
14. Six strips are woven into a pattern as shown. What does the pattern look like from the back?



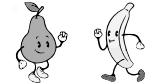
15.



Together we cost 5 cents.



Together we cost 7 cents.



Together we cost 10 cents.

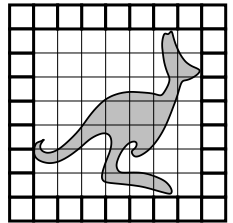


How much do we cost together?

- A) 8 cents B) 9 cents C) 10 cents D) 11 cents E) 12 cents

16. Anna used 32 small white squares to frame a 7 by 7 picture. How many of these small white squares does she need to frame a 10 by 10 picture?

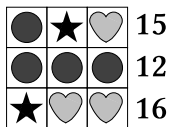
- A) 36 B) 40 C) 44 D) 48 E) 52



Questions for 5 points

17. Equal shapes stands for the same number. The sum of the three numbers in each row is shown to the right of the row. Which number does the stand for ★?

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



18. The pages of a book are numbered 1, 2, 3, 4, 5 and so on. The digit 5 appears exactly 16 times. What is the maximum number of pages this book could have?

- A) 49 B) 64 C) 66 D) 74 E) 80

19. On a meadow there are 15 animals: cows, sheep and geese. We know that precisely 10 are not cows and precisely 8 are not sheep. How many geese are on the meadow?

- A) 2 B) 3 C) 4 D) 8 E) 10