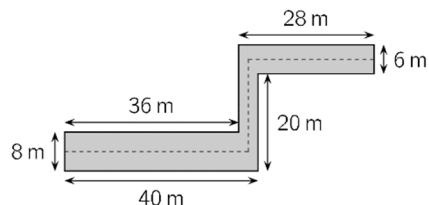19. The pages of a book are numbered 1, 2, 3, 4, 5 and so on. The digit 5 appears exactly 16 times. What is the maximum number of pages this book could have?
(A) 49     (B) 64     (C) 66     (D) 74     (E) 80

**5 point problems**

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?
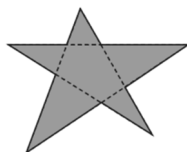(A) 63     (B) 68
(C) 69     (D) 71     (E) 83

21. In a park there are 15 animals: cows, cats and kangaroos. We know that precisely 10 are not cows and precisely 8 are not cats. How many kangaroos are in the park?
(A) 2     (B) 3     (C) 4     (D) 8     (E) 10

22. Martha glued few triangles and got a star shown in the picture. At least how many triangles has she used?
(A) 2     (B) 3
(C) 4     (D) 5     (E) 6

23. 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

24. 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?
(A) 12     (B) 13     (C) 21     (D) 22     (E) 23

figure 1

figure 2
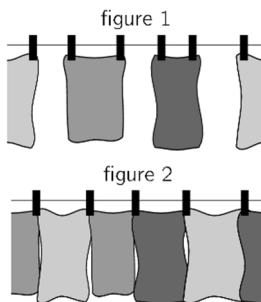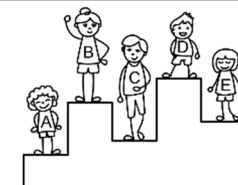
**3 point problems**

1. 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

2. In the pictures, each dot stands for 1 and each bar stands for 5.
For example, stands for 8. Which picture stands for 12?
(A)    (B)    (C)    (D)    (E)

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

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?
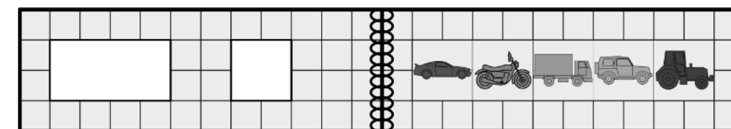
(A)    (B)    (C)

(D)    (E)
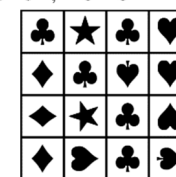
5. Karina cuts out one piece like this from the sheet. Which piece can she get?
(A)    (B)    (C)    (D)    (E)

6. Three people walked across a field of snow wearing muddy shoes. In which order did they do this?

(A)    (B)

(C)    (D)    (E)

**7.** Pia makes shapes with the connected sticks shown in the picture. Which of the following shapes needs more sticks than Pia has?

(A)  (B)

(C)  (D)  (E)

**8.** What number should replace the question mark when all the calculations are completed correctly?
(A) 4      (B) 5      (C) 6      (D) 7      (E) 8

| 2 | + | 1 | = |   |
|---|---|---|---|---|
|   | + |   | ▪ | = |
|   | − |   | = | ? |
|   | = |   |   |   |
|   | 9 |   |   |   |

(with 0 and + above)

**9.** 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

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

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

**4 point problems**

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

(A)      (B)      (C)      (D)      (E)

**12.** The weight of dog toy is a whole number. How much does one dog toy weigh?
(A) 7 kg          (B) 8 kg          (C) 9 kg          (D) 10 kg          (E) 11 kg

**13.** 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

**14.** Steven wants to write each of the digits 2, 0, 1 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 0 or 1    (B) Either 0 or 2    (C) Only 0    (D) Only 1          (E) Only 2

□ □ □ + ?

**15.** 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

400 g    100 g    ?

**16.**

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

**17.** Each shape stands for a different 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

○ ★ ♡ 15
○ ○ ○ 12
★ ♡ ♡ 16

**18.** 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