

X1 score

1 ( E )

63, 74, 100, 105, 30, 121

Looking at the numbers above, there are  $x$  pieces of 2's multiples,  $y$  pieces of 3's multiples, and  $z$  pieces of 5's multiples. Find  $x + y + z$ .

(A) 5 (B) 6 (C) 7 (D) 8 (E) 9

X2 score

2 ( D )

$$\frac{13}{18} - \frac{5}{9} + \frac{1}{6} = ?$$

(A)  $\frac{7}{18}$  (B)  $\frac{1}{9}$  (C)  $\frac{1}{6}$  (D)  $\frac{1}{3}$  (E)  $\frac{1}{2}$ 

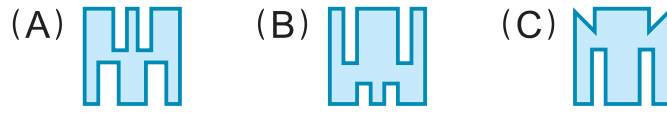
X3 score

3 ( B )



The dotted line shows the line of symmetry.

What's the complete figure?



X4 score

4 ( B )

40 people answered two questions A and B. 20 people answered A correctly, and 23 answered B correctly. There were 11 people who answered both questions wrong. How many people answered both questions correctly?

(A) 3 (B) 14 (C) 17 (D) 20 (E) 29 people

X5 score

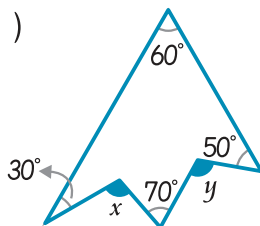
5 ( C )

The average height for Team Basketball is 185 cm. After Jeff joined the team, the average height became 186 cm. If Jeff is 192 cm tall, how many people are there on the team (including Jeff)?

(A) 5 (B) 6 (C) 7 (D) 8 (E) 9 people

X6 score

6 ( D )



From the figure on the left,  $\angle x + \angle y = ?$

(A)  $90^\circ$  (B)  $120^\circ$  (C)  $180^\circ$  (D)  $210^\circ$  (E)  $360^\circ$

X7 score

7

- ( D ) A parallelogram and a trapezoid have the same area. The height of the parallelogram is 4 times greater than the height of the trapezoid. The base of the parallelogram is 3 cm. The upper side of the trapezoid is 7 cm. What's the difference between the trapezoid's upper and lower sides?  
 (A) 17 (B) 13 (C) 11 (D) 10 (E) 2 cm

X8 score

8

( C )

Potato: 600 kg  
 Tomato: 1,452 kg  
 Eggplant: 2,250 kg  
 Lettuce: 2,008,000 g  
 Onion: 798 kg

Looking at the weights on the left, which vegetable is the heaviest?

- (A) Potato (B) Tomato (C) Eggplant  
 (D) Lettuce (E) Onion

X9 score

9

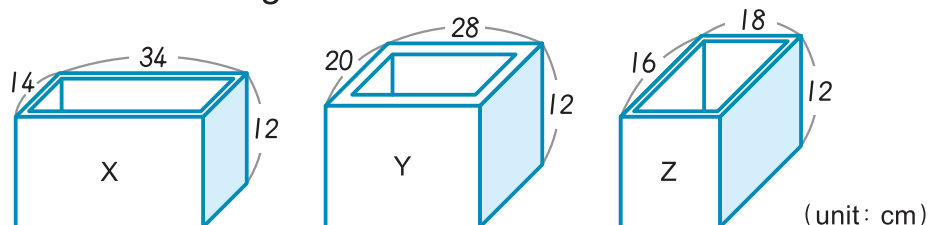
- ( B ) Which of the following is correct?

- (A) The factor of  $5 \times 7 \times 17 \times 19$  is only 5, 7, 17, and 19.  
 (B)  $2 \times 13$ ,  $2 \times 19$ ,  $13 \times 19$ , and  $2 \times 13 \times 19$  are all factors of  $2 \times 13 \times 19$ .  
 (C)  $5 \times 11 \times 13$  is a factor of  $3 \times 5 \times 11 \times 13$ , but not a factor of  $5 \times 11 \times 13$ .  
 (D) The only factors for  $2 \times 11 \times 13$  are  $2 \times 11$ ,  $2 \times 13$ , and  $11 \times 13$ .  
 (E)  $7 \times 13$  is a factor of  $2 \times 7 \times 13$  but not a factor of  $7 \times 11 \times 13$ .

X10 score

10

- ( C ) The thickness of the fishtanks below are 1 cm, 2 cm, and 1 cm for X, Y, and Z respectively. After Stella pours 1,000 ml of water into each tank, which tank has the highest water level?



- (A) X (B) Y (C) Z  
 (D) The water levels are all the same.  
 (E) There's not enough information provided.



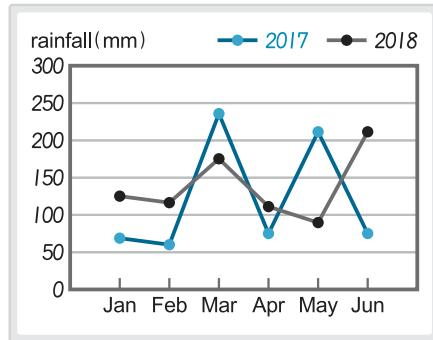
More questions are on the next page.

X11 score

- 11 ( D ) It takes the storeowner 10 seconds to make one dumpling, and 45 seconds for a new employee to do the same. If the storeowner and new employee start making dumplings at the same time, how many minutes later will there be a difference of 28 dumplings between them?  
 (A) 3 (B) 4 (C) 5 (D) 6 (E) 7 minutes

X12 score

- 12 ( A )



- The graph on the left shows the rainfall record for 6 months (January–June) of the years 2017 and 2018. Which month and year had the least rainfall?  
 (A) 2017, Feb (B) 2017, Apr  
 (C) 2018, Jun (D) 2018, Apr  
 (E) 2018, May

X13 score

- 13 ( E ) From Question 12, which month had the greatest difference in rainfall between 2017 and 2018?  
 (A) February (B) March (C) April (D) May (E) June

X14 score

- 14 ( B ) Rank the unknown numbers P, Q, R, S in order from the greatest to the smallest.

$$P + 125 \div 5 = 174$$

$$154 - Q \times 4 = 62$$

$$(200 - R) \times 8 = 120$$

$$240 \times S \div 8 = 300$$

- (A)  $P > R > S > Q$  (B)  $R > P > Q > S$  (C)  $Q > R > P > S$   
 (D)  $S > R > P > Q$  (E)  $P > R > Q > S$

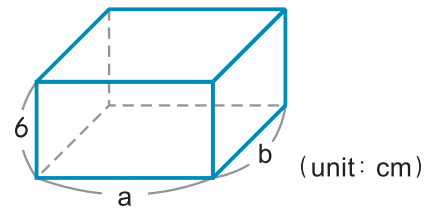
X15 score

- 15 ( E ) Mr. Tsai owns farmland in the shape of a trapezoid. The upper side is 624 meters, the lower side is 416 meters, and the height is 256 meters. Mr. Tsai wants to grow lettuce on 21% of the farmland, spinach on 34% of the farmland, and yams on the rest of the land. How much area is used for yams?

- (A) 7,321,600 (B) 5,990,400 (C) 73,216  
 (D) 732.16 (E) 59,904  $\text{m}^2$

X16 score

- 16 ( D ) For the figure on the right, the sum of all the sides is 100 cm. If b is 3 less than a, what is a = ?  
 (A) 8 (B) 9 (C) 10  
 (D) 11 (E) 12



X17 score

- 17 ( A ) There are 160 red and blue pens altogether, shared evenly with a group of people. If each person gets 6 blue pens, we will need 5 more blue pens. If each person gets 9 red pens, there will be 15 extra red pens. How many red pens are there in total?  
 (A) 105 (B) 106 (C) 107 (D) 108 (E) 109 red pens

X18 score

- 18 ( C ) If  $P = 6 \times 2.8$ ,  $Q = 6 \times 4$ ,  $R = 6 + 6 + 6 + 6 + 6$ ,  $S = 6 \times 5.1$ , and T is 3 times of 6, rank P, Q, R, S, T from the greatest to the least.  
 (A)  $P > Q > R > S > T$  (B)  $Q > R > T > P > S$   
 (C)  $S > R > Q > T > P$  (D)  $S > R > T > Q > P$   
 (E)  $Q > R > T > S > P$

X19 score

- 19 ( B )
- 
- figure 1      figure 2      figure 3      figure 4      .....

Looking at the pattern above, which figure has 124 matchsticks?  
 (A) figure 14 (B) figure 15 (C) figure 16  
 (D) figure 17 (E) figure 18

X20 score

- 20 ( B )
- 
- (A) (B) (C)  
 (D) (E)



More questions are on the next page.

X21 score

21 ( B ) Which of the following is **wrong** ?

- (A)  $13 \times 6 + 18 = (13 \times 6) + 18$   
 (B)  $68 - 15 \times 3 + (72 \div 8) = (68 - 15) \times 3 + 72 \div 8$   
 (C)  $150 + (45 \div 5) - 88 = 150 + 45 \div 5 - 88$   
 (D)  $32 - 36 \div 4 + (23 + 17) = 32 - (36 \div 4) + 23 + 17$   
 (E)  $320 + 64 \div 8 - 24 = 320 + (64 \div 8) - 24$

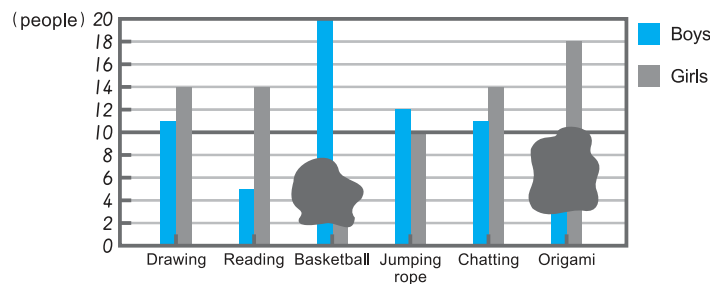
X22 score

22 ( A ) Which is the smallest number below?

- (A)  $\frac{1}{50}$  (B)  $\frac{1}{5}$  (C) 0.1 (D) 0.5 (E) 0.05

X23 score

23 ( C ) The graph shows Class 5's votes for their favourite after-school activities. There are 64 boys and 74 girls in Class 5. Which of the following is correct?



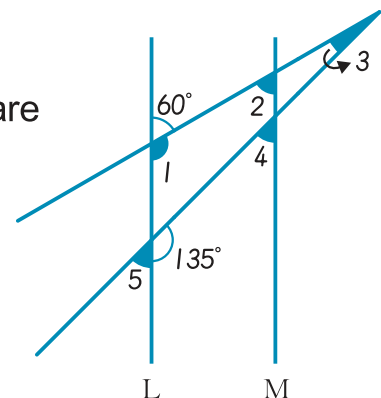
Favourite after-school activities, voted by Class 5

- (A) The activity with the greatest difference in votes between boys and girls is reading.  
 (B) The activity with the least difference in votes between boys and girls is drawing.  
 (C) The activity with the most number of votes from boys is basketball.  
 (D) The activity with the most number of votes from girls is chatting.  
 (E) There are 20 people who voted for jumping rope.

X24 score

24 ( D ) From the picture on the right, if L and M are parallel to each other, what is **incorrect** ?

- (A)  $\angle 1 = 120^\circ$  (B)  $\angle 2 = 60^\circ$   
 (C)  $\angle 3 = 15^\circ$  (D)  $\angle 4 = 30^\circ$   
 (E)  $\angle 5 = 45^\circ$



X25 score

25 ( E ) From 7 am to 9:30 am, how much did the hour hand move as a fraction of the entire clockface?

(A)  $\frac{1}{6}$  (B)  $\frac{1}{8}$  (C)  $\frac{1}{12}$  (D)  $\frac{1}{24}$  (E)  $\frac{5}{24}$  of the clock

A, B, C, D, E represent numbers from 1 to 5. There are no repeated numbers. E is 3 times of D, and E is smaller than A. The difference between A and E is equal to C, and C is  $\frac{1}{2}$  of B. Answer **26** - **27**.

X26 score

26 ( B ) What is C?

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

X27 score

27 ( A ) What is  $A \times B$ ?

(A) 20 (B) 15 (C) 12 (D) 8 (E) 6

X28 score

28 ( C ) Chris is observing how clouds change. Every 20 minutes, an alarm rings, reminding him to make an observation. If the first alarm sounds at 10:35 am and the last alarm sounds at 2:15 pm, how many observations did he make during this time?

(A) 10 (B) 11 (C) 12 (D) 13 (E) 14 times

X29 score

29 ( C ) Each truck can carry the same weight. Three trucks can carry 10 tonnes in total. If you have 60 tonnes of equipment to ship, but you only have two trucks, how many trips does each truck have to make?

(A) 4.5 (B) 6 (C) 9 (D) 12 (E) 15 trips

X30 score

30 ( A ) The storeowner has some rice. The first day she sold  $\frac{2}{7}$  of the rice, and the second day she sold  $\frac{1}{5}$  of the rice left after the first day. She had 560 kg of rice after the two days. How much rice did she have at first?

(A) 980 (B) 1,840 (C) 2,660 (D) 3,500 (E) 4,900 kg