

2010_Grade_6_Mathematics_Set_A

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2010 Problem Set A

[1] Calculate the following.

(1) $243 - 65$

(2) 27×3.4

(3) $912 \div 4$

(4) $8 - 0.5$

(5) $6 \div 5$ (Divide completely and write the quotient as a decimal number.)

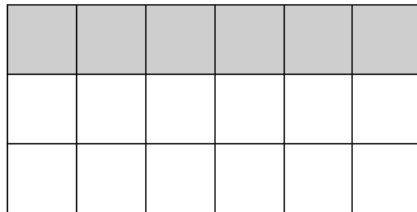
(6) $50 + 150 \times 2$

[2] Answer the following questions.

(1) There is an 8 m bar which weighs 4 kg.
How many kg will 1 m of this bar weigh? Write the answer and the expression to calculate the answer.

(2) If you divide 2 l of juice equally into 3 parts, how many l will each part be? Write your answer as a fraction.

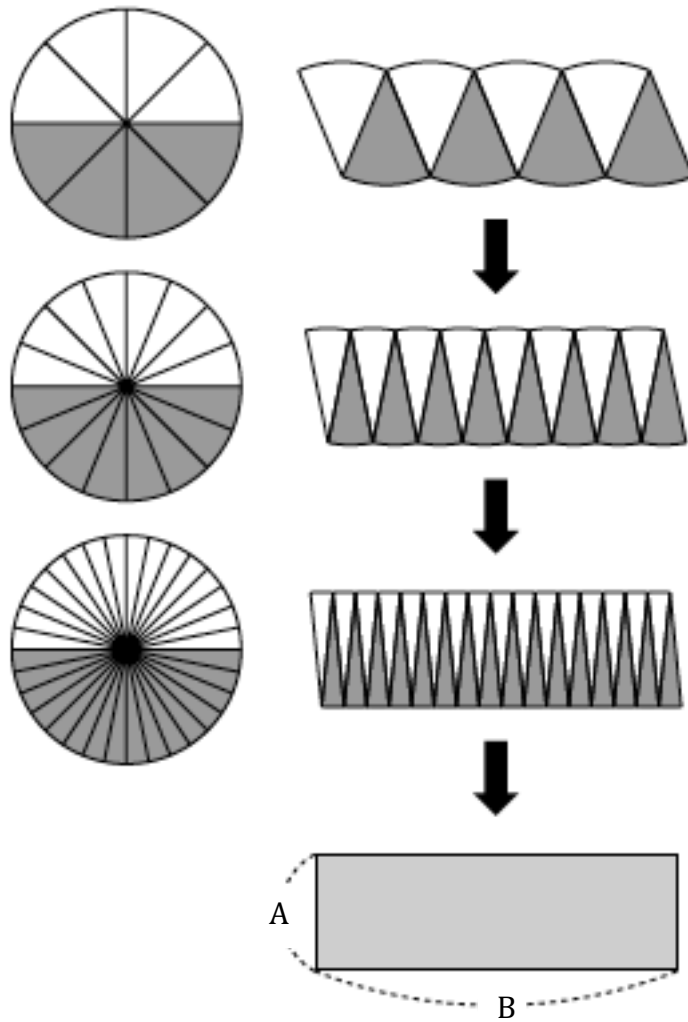
[3] Select the fraction that represents the shaded part of the rectangle from **1** through **4** below and write the number.



- 1 $\frac{1}{4}$
- 2 $\frac{1}{3}$
- 3 $\frac{6}{12}$
- 4 $\frac{2}{3}$

- [4] If we split a circle into smaller and smaller segments as shown below and re-arrange them, the result will be a rectangle.

Therefore, the area of a circle is the product of A and B.



- (1) Which part of the circle does A come from? Select one from **1** through **4** below and write the number.

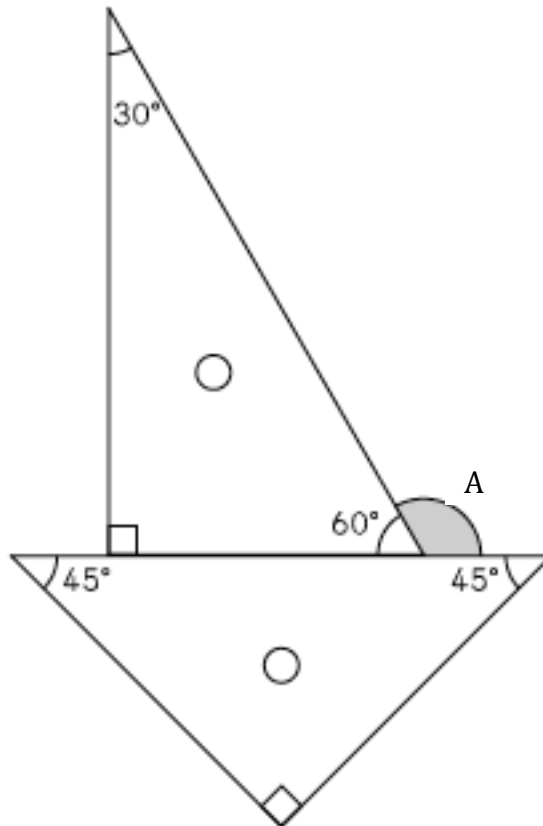
- 1 Radius
- 2 Diameter
- 3 Circumference
- 4 A half of the circumference

(2) Which part of the circle does B come from? Select one from **1** through **4** below and write the number.

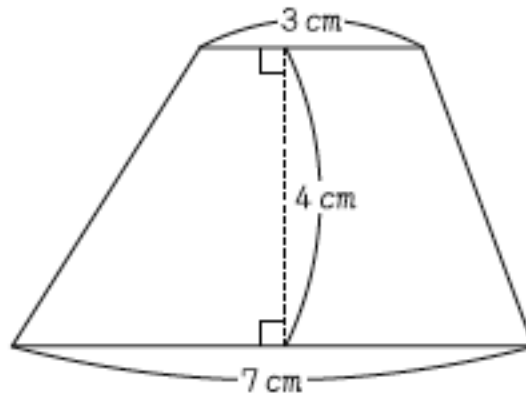
- 1 Radius
- 2 Diameter
- 3 Circumference
- 4 A half of the circumference

[5] Answer the following questions.

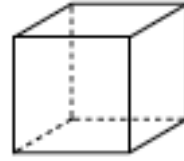
(1) If we place the two set squares as shown below, how many degrees will the measure of angle A be? Write your answer.



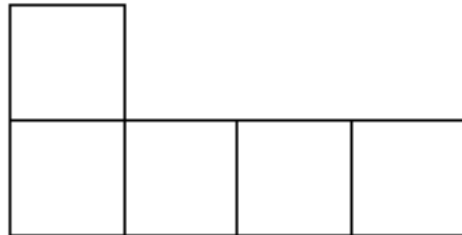
- (2) Write the area and the expression to calculate the area of the trapezoid below.



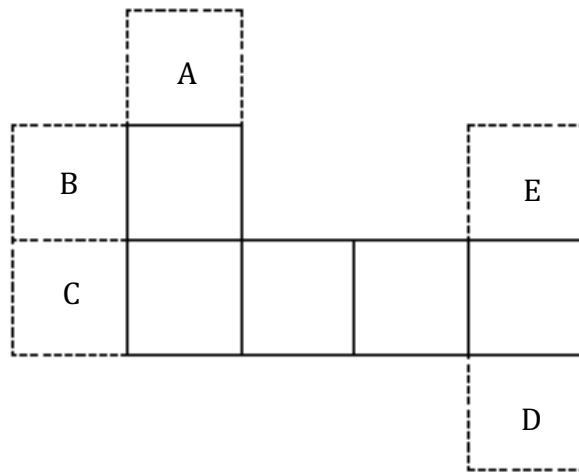
- [6] There is a cube like the one shown on the right.
We are going to draw a net for this cube.



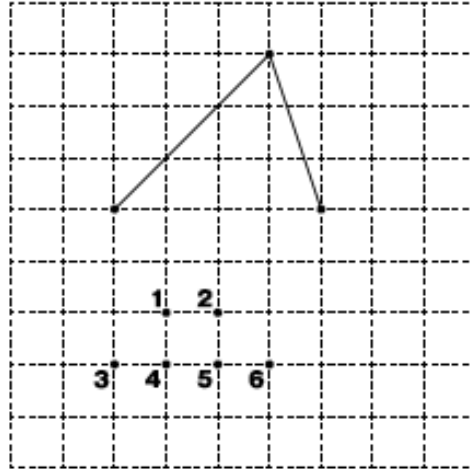
There are 6 faces in a cube. We drew 5 faces as shown below.



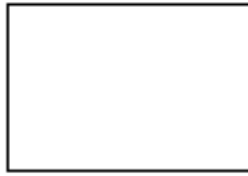
In order to complete a net of a cube, where should we draw the last face?
Select one from **A** through **E** below and write the letter.



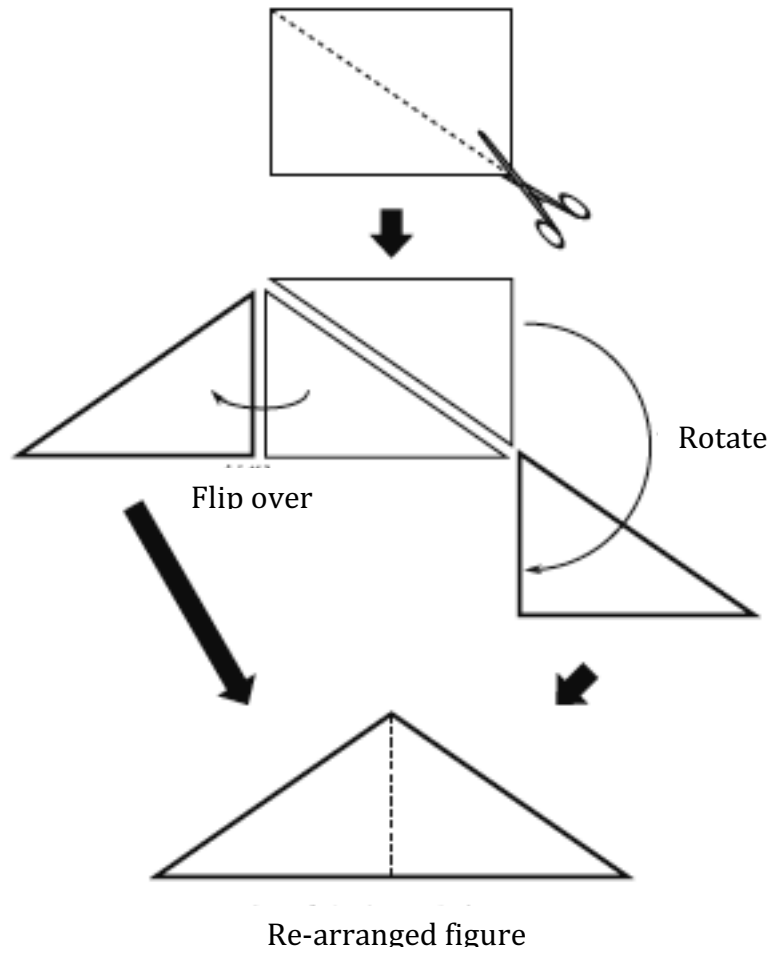
- [7] We are drawing a parallelogram on the grid paper shown below.
Where should the final vertex be?
Select one from **1** through **6** and write the number.



[8] There is a rectangle like the one shown in the figure below.



This rectangle is cut into 2 pieces by cutting along the diagonal and re-arranged as shown.



(1) What is the area of the re-arranged figure compared to the area of the original rectangle? Select one from **1** through **4** below and write the number.

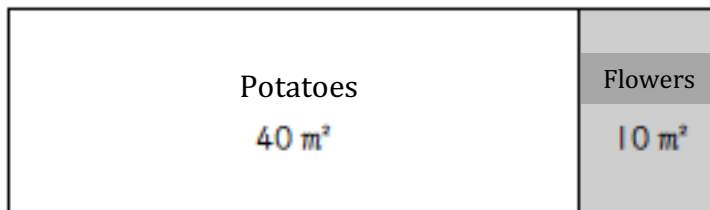
- 1 The area will be 0.5 times as much.
- 2 The area will be 1.5 times as much.
- 3 The area will be 2 times as much.
- 4 The area will not change.

(2) Select the name of the re-arranged figure from **1** through **5** below and write the number.

- 1 Right triangle
- 2 Isosceles triangle
- 3 Equilateral triangle
- 4 Parallelogram
- 5 Rhombus

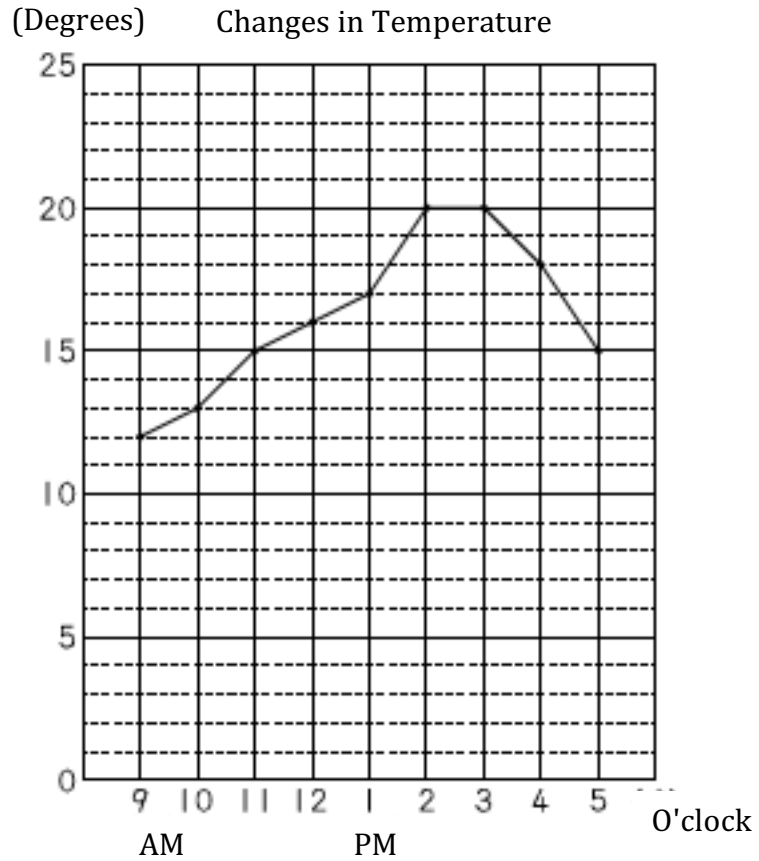
[9] Answer the following questions.

(1) The figure below shows the garden at Toshiko's school.



What is the proportion of the area where potatoes are planted, 40 m^2 , compared to the total area of the school garden, 50 m^2 ? Write your answer.

- (2) The broken line graph below shows the change in temperatures on a certain day.



The largest one hour increase in temperatures happened between what time and what time? Write your answer.