Released Assessment Questions, 2015

Junior Division

Grade **6** **Mathematics**

Assessment of Reading, Writing and Mathematics

INSTRUCTIONS

Answering Multiple-Choice Questions

Like this: ● **Not this:** ⊗ ✓ ◒ ◉

- Use a pencil only.
- Fill only one circle for each question.
- Fill the circle completely.
- Cleanly erase any answer you wish to change.

Answering Open-Response Questions

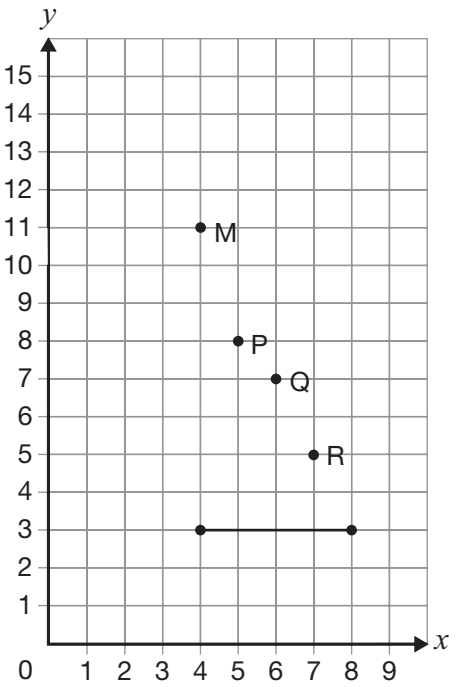
- Write on the space provided in this booklet.

You are now ready to start.

Education Quality and Accountability Office
EQAO

2 Carlton Street, Suite 1200, Toronto ON M5B 2M9 | Telephone: 1-888-327-7377 | Web site: www.eqao.com

1 A triangle will be constructed using the base shown on the grid below.



Which point can be used to complete the triangle so that its area is 8 units^2?

- ○ Point M
- ○ Point P
- ○ Point Q
- ○ Point R

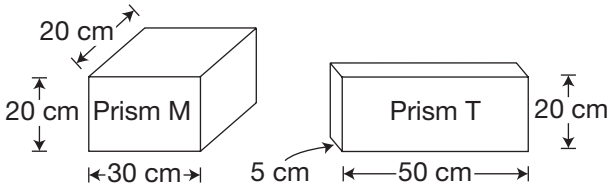
2 A pattern is shown below.

64, 32, 16, 8, 4, ...

Which rule describes how to find the next term in the pattern?

- ○ divide the previous term by 2
- ○ divide the previous term by 4
- ○ subtract 16 from the previous term
- ○ subtract 32 from the previous term

3 Two rectangular prisms are shown below.

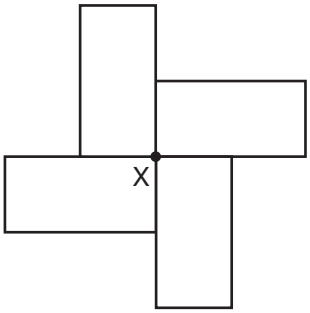


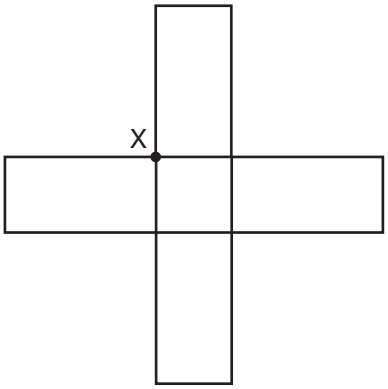
How much larger is the volume of Prism M than that of Prism T?

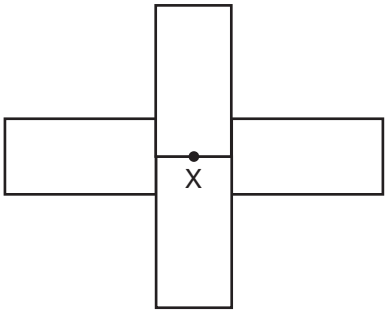
- ○ 5000 cm^3
- ○ 7000 cm^3
- ○ 12 000 cm^3
- ○ 17 000 cm^3

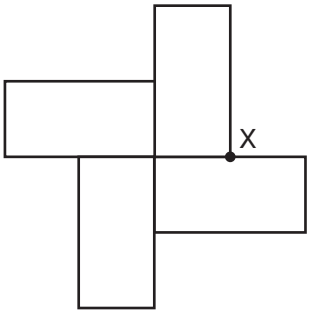
4 A pattern is created by rotating a rectangle 90° clockwise about Point X. This rotation is repeated.

Which of the following shows the pattern?

○ 

○ 

○ 

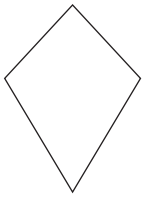
○ 

5 Which of the quadrilaterals shown below has

- no lines of symmetry and
- two acute angles?

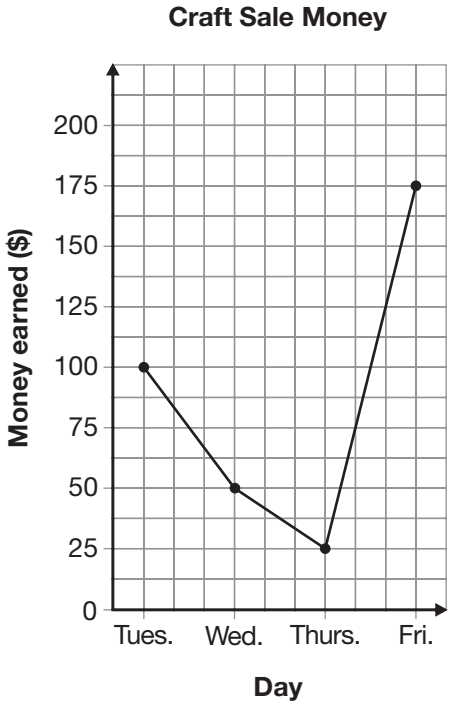
○ 
Isosceles trapezoid

○ 
Parallelogram

○ 
Kite

○ 
Right trapezoid

6 The graph below displays the amount of money earned at a craft sale over 4 days.



What is the range between the smallest and the largest amount of money earned over the 4 days?

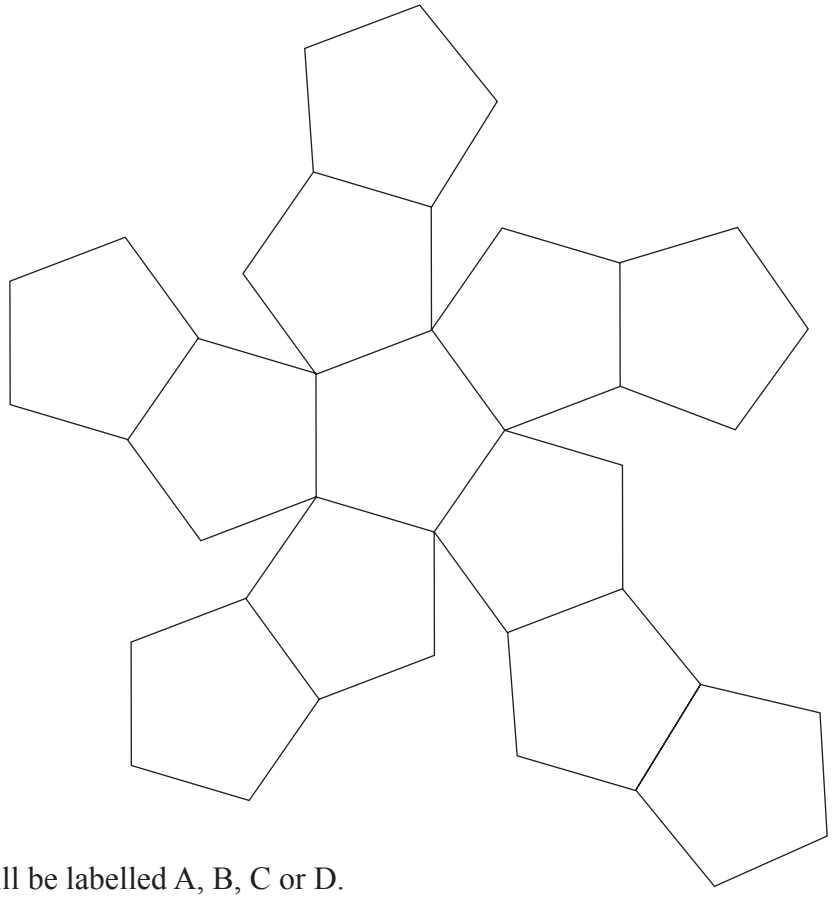
- ◯ $175
- ◯ $150
- ◯ $75
- ◯ $25

7 Mr. Adams buys juice boxes for 384 students. The juice boxes are sold in cases of 24.

If each student receives one juice box, how many cases has Mr. Adams bought?

- ◯ 12
- ◯ 16
- ◯ 360
- ◯ 408

8 Lucy is making a game. She uses the net of congruent pentagons below to make a 12-sided figure to roll.



Each pentagon will be labelled A, B, C or D.

Write A, B or C on pentagons of the net so that

- the probability of rolling an A is $\frac{1}{6}$.
- the probability of rolling a B is $\frac{2}{12}$.
- the probability of rolling a C is $\frac{3}{9}$.

What is the probability of rolling a D?

Justify your answer.

The probability of rolling a D is _____ .

9 Mr. Scott plans a class trip for the 30 students in his class. He must pay the following costs per student:

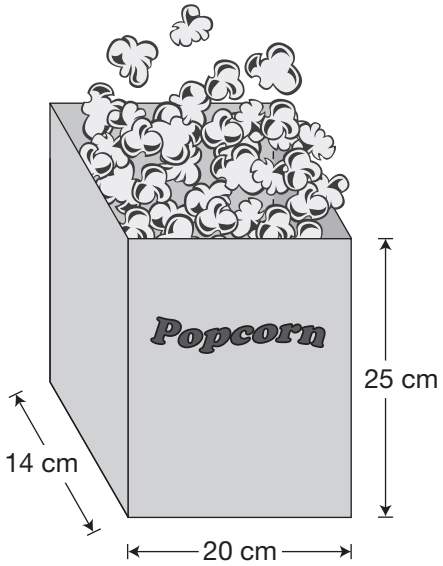
- admission: $3.80
- bus: $10.40
- snack: $5.55
- supplies: $7.31

Round the costs to the nearest dollar and use them to estimate the total cost for the 30 students.

Show your work.

The estimated total cost for the 30 students is $ _____ .

10 The container of popcorn pictured below is in the shape of a rectangular prism.

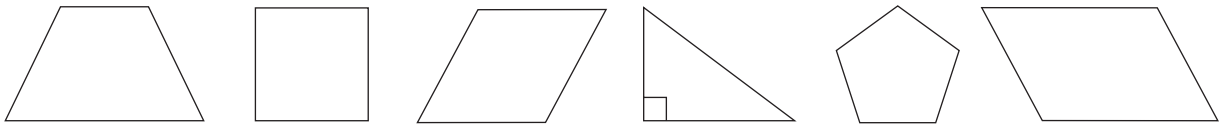


What is the smallest amount of paper needed to make this container?

Show your work.

The smallest amount of paper needed to make this container is _____ cm^2.

11 Six polygons are shown below.



Isosceles trapezoid — A

Square — B

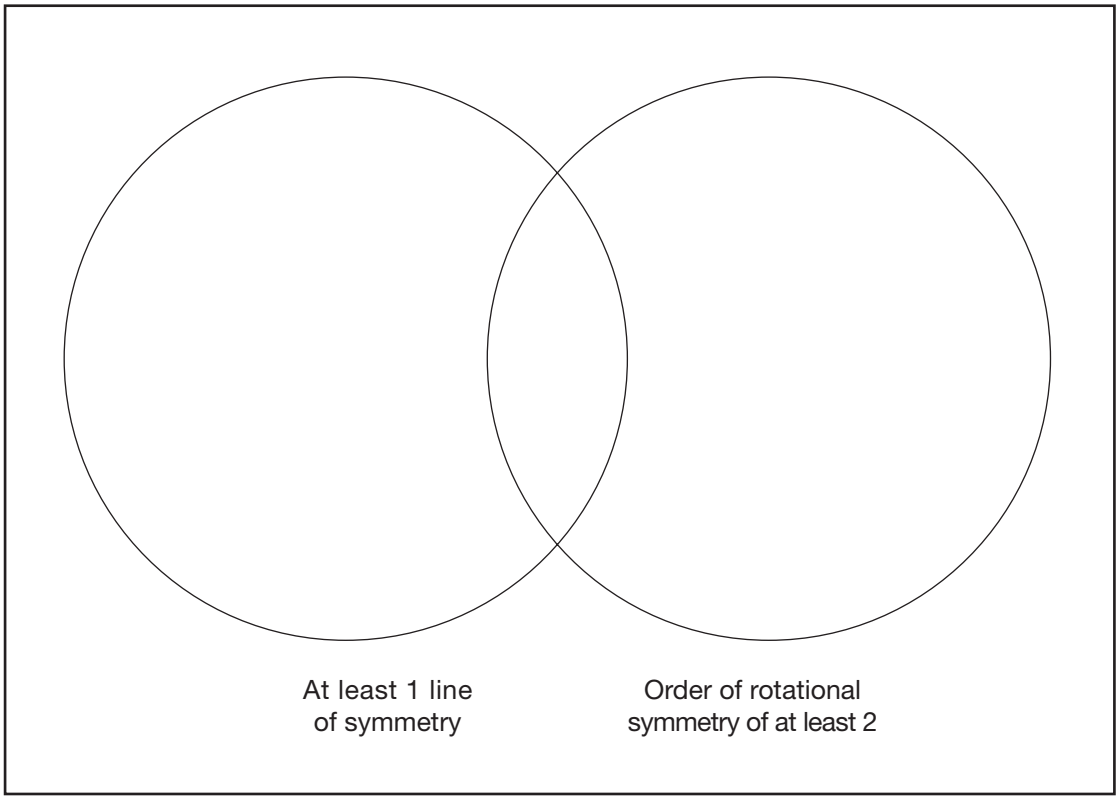
Rhombus — C

Right triangle — D

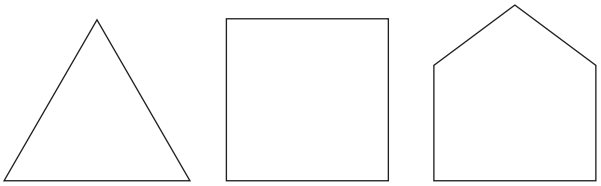
Regular pentagon — E

Parallelogram — F

Write the letter of each of these polygons in the appropriate section of the Venn diagram below.



12 Darren starts with a triangle and creates a pattern.



Term 1 Term 2 Term 3

Each term in the pattern is a polygon with one more side than the term before it.

How many sides will Term 8 have?

- ○ 6
- ○ 8
- ○ 9
- ○ 10

13 How many millilitres are there in 0.56 litres?

- ○ 5.6 mL
- ○ 56 mL
- ○ 560 mL
- ○ 5600 mL

14 A list of numbers is shown below:

43, 50, 58, 49, 57, 50, 44, 43, 54, 45

Which of the following stem and leaf plots represents these numbers?

○

Stem	Leaf
4	3, 4, 5, 9
5	0, 4, 7, 8

○

Stem	Leaf
4	3, 3, 4, 5, 9
5	0, 0, 4, 7, 8

○

Stem	Leaf
4	3, 3, 5, 5, 9
5	0, 0, 4, 7, 8

○

Stem	Leaf
4	3, 3, 5, 5, 9
5	0, 0, 0, 4, 7, 8

15 Betsy has a bakery. She uses 128.4 g of flour to make 6 muffins.

How much flour does it take to make 72 muffins?

- ○ 21.4 g
- ○ 770.4 g
- ○ 1540.8 g
- ○ 9244.8 g

16 Isaac and Presley each have a jar of coloured cubes. The contents of their jars are shown in the table below.

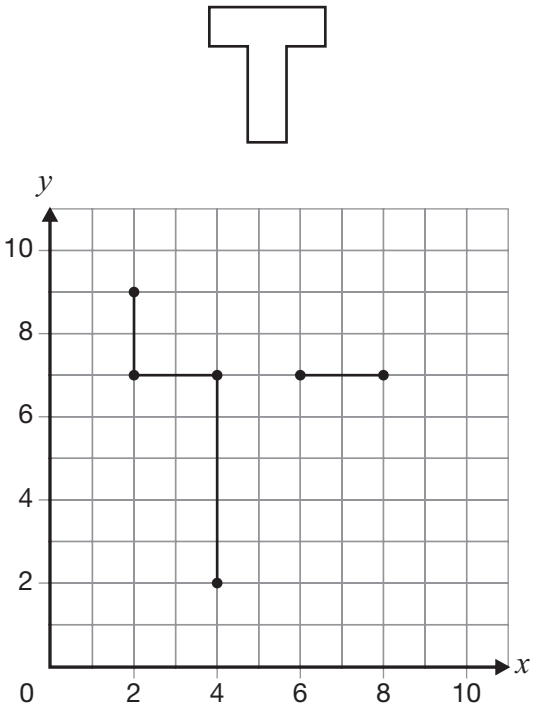
Colour of cube	Number of cubes in Isaac's jar	Number of cubes in Presley's jar
Red	6	2
Blue	6	3
Green	5	3
Purple	3	2

They reach into their jars, and each chooses one cube without looking.

What colour of cube has the same probability of being chosen from Isaac's jar as from Presley's jar?

- ○ red
- ○ blue
- ○ green
- ○ purple

17 Tyra enlarges the following shape on the grid below.



What are the coordinates of the two missing points that Tyra needs to complete the enlarged shape?

- ○ (9, 8), (2, 6)
- ○ (8, 9), (6, 2)
- ○ (8, 9), (2, 6)
- ○ (9, 8), (6, 2)

18 Which of the following numbers has the greatest value?

- ○ 0.4
- ○ 0.25
- ○ 0.089
- ○ 0.304

STOP

Section 2

After each assessment, EQAO makes approximately half of the test items (questions) public. This allows EQAO to build a bank of assessment material that can be used in the future. Items that are not published in this booklet (Section 2) are replaced by their description. Test booklets and examples of student answers from the past five years are available at www.eqao.com.

Items that are not being published have been described below, with a reference to the skill they assessed.

1 identify whole numbers in words (Thinking)

2 solve problems involving multiplying and dividing decimal numbers (Knowledge and Understanding)

3 determine the relationship between fractions, decimal numbers and percents (Application)

4 identify prime factors of numbers (Application)

5 determine when precise measurements are appropriate (Application)

6 solve a problem using the area of a polygon (Application)

7 solve a problem involving conversions of m^2 to cm^2 (Thinking)

8 determine the relationship between various prisms (Knowledge and Understanding)

9 construct an angle (Thinking)

10 describe transformations on a grid (Thinking)

11 apply transformations on a grid (Thinking)

12 determine a term, given a term number, of a pattern (Application)

13 identify variables and constants in an equation (Knowledge and Understanding)

14 solve simple algebraic expressions (Knowledge and Understanding)

15 determine a term of a pattern (Thinking)

16 interpret data presented in graphs (Application)

17 determine the theoretical probability of an event (Application)

18 demonstrate an understanding of mean (Thinking)