APPENDIX B

Example Mathematics Items Grade 4

Mary left Apton and rode at the same speed for 2 hours.

She reached this sign.

Mary continues to ride at the same speed to Brandon.

How many hours will it take her to ride from the sign to Brandon?

Ⓐ $1\frac{1}{2}$ hours

Ⓑ 2 hours

● 3 hours

Ⓓ $3\frac{1}{2}$ hours

M051007

Joan had 12 apples. She ate some apples, and there were 9 left.
Which number sentence describes what happened?

Ⓐ $12 + 9 = \square$

Ⓑ $9 = 12 + \square$

● $12 - \square = 9$

Ⓓ $9 - \square = 12$

M041107

Tom ate $\frac{1}{2}$ of a cake, and Jane ate $\frac{1}{4}$ of the cake. How much of the cake did they eat altogether?

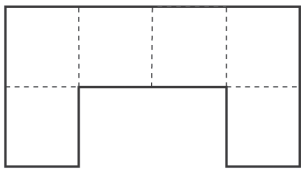
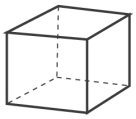
Answer: $\frac{3}{4}$

$\frac{1}{2} + \frac{1}{4}$

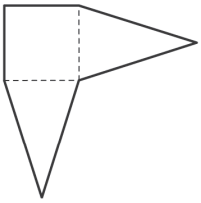
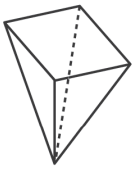
$\frac{2}{4} + \frac{1}{4}$

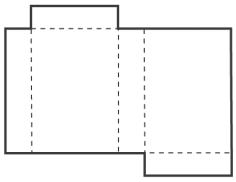
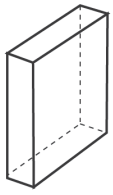
M041299

Ina found the following patterns to make containers. Which pattern actually makes the container shown beside it?

Ⓐ  

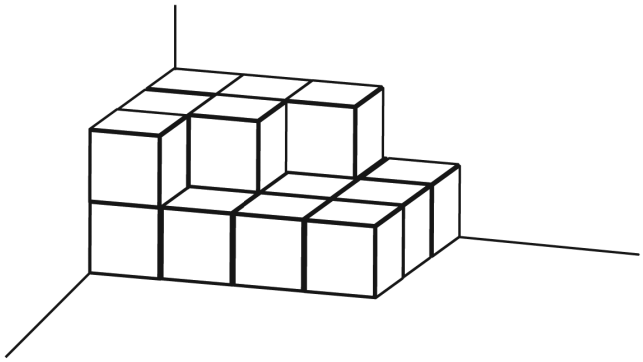
Ⓑ

Ⓒ  

●  

M041265

M041158



Ann stacks these boxes in the corner of the room. All the boxes are the same size. How many boxes does she use?

Ⓐ 25

Ⓑ 19

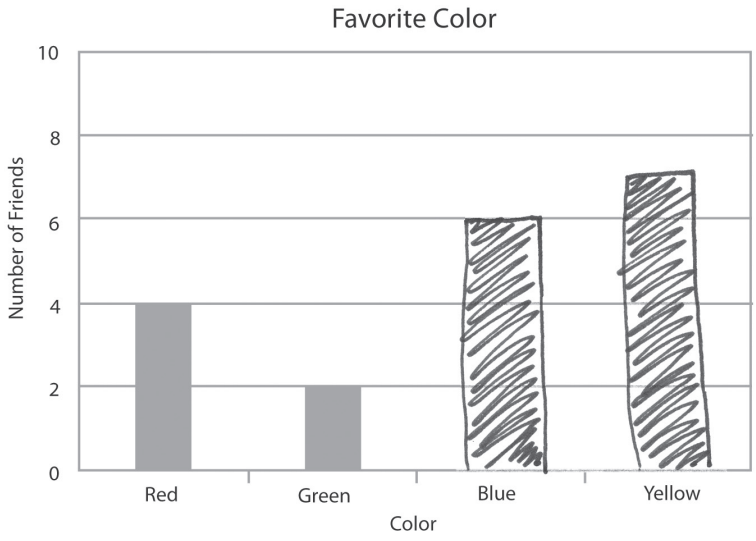
● 18

Ⓓ 13

Darin asked his friends to name their favorite color. He collected the information in the table shown below.

Favorite Color	Number of Friends
Red	4
Green	2
Blue	6
Yellow	7

Then Darin started to draw a graph to show the information. Complete Darin's graph.



M031133

TIMSS 2015

Example Mathematics Items
Grade 8

M052061

Kim is packing eggs into boxes.

Each box holds 6 eggs.

She has 94 eggs.

What is the smallest number of boxes she needs to pack all the eggs?

Answer: 16 boxes

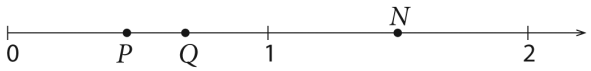
94 ÷ 6
15 R 4

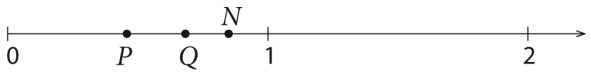
M032662

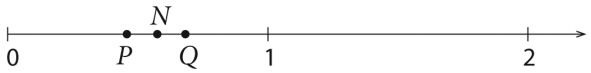
P and Q represent two fractions on the number line above.

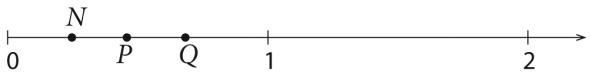
$P \times Q = N$.

Which of these shows the location of N on the number line?

Ⓐ 

Ⓑ 

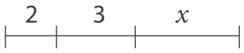
Ⓒ 

● 

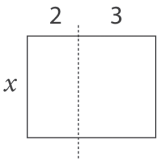
Which of these could represent the expression $2x + 3x$?

Ⓐ The length of this segment:

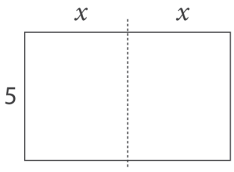
Ⓑ The length of this segment:



● The area of this figure:

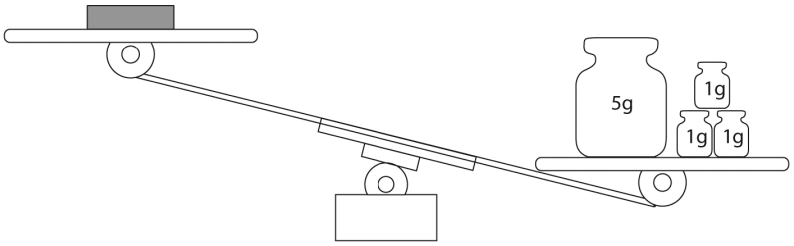


Ⓓ The area of this figure:

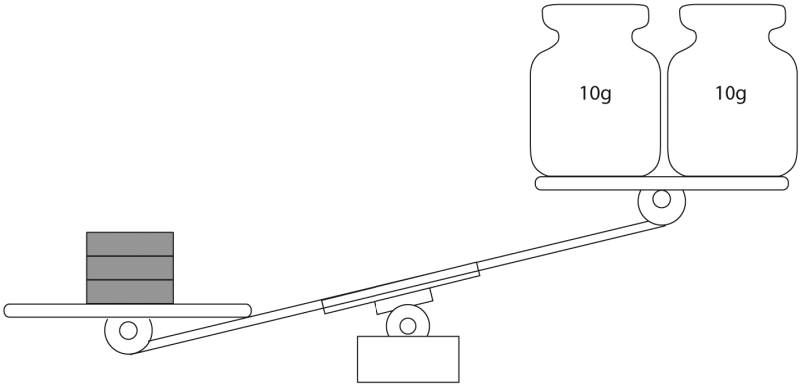


M032419

Jo has three metal blocks. The weight of each block is the same.
When she weighed one block against 8 grams, this is what happened.



When she weighed all three blocks against 20 grams, this is what happened.

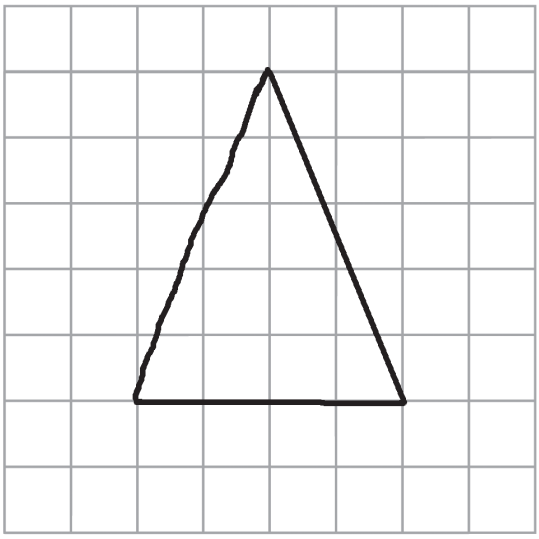


Which of the following could be the weight of one metal block?

Ⓐ 5 g
Ⓑ 6 g
● 7 g
Ⓓ 8 g

M032424

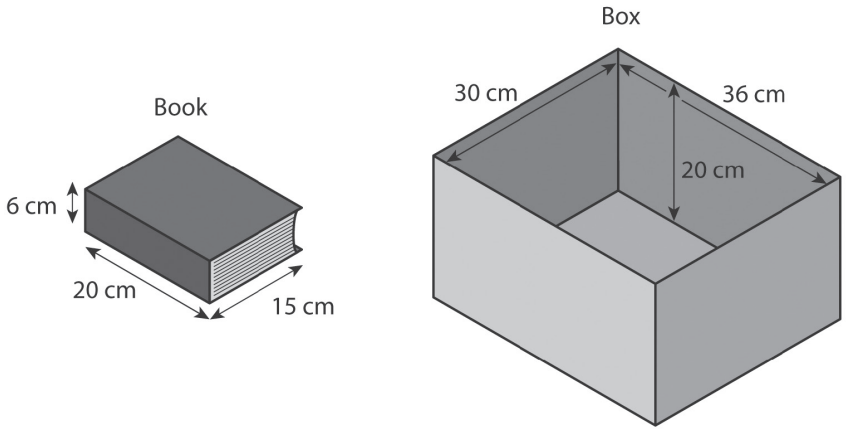
The length of side of each of the small squares represents 1 cm. Draw an isosceles triangle with a base of 4 cm and a height of 5 cm.



M042270

Ryan is packing books into a rectangular box.

All the books are the same size.



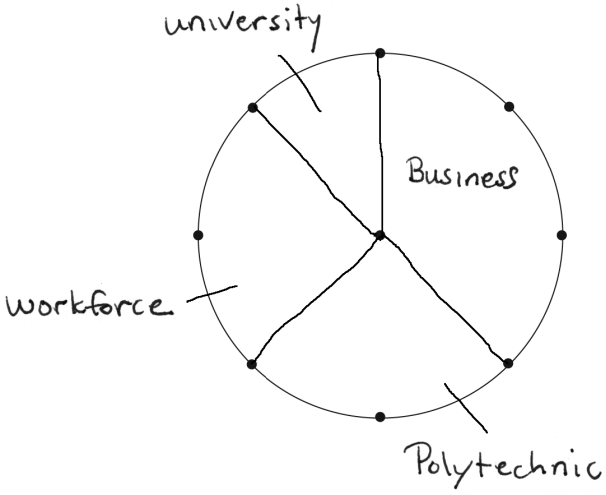
What is the largest number of books that will fit inside the box?

Answer: 12

M052206

Of the 400 students in a school, 50 plan to go to university, 100 to a polytechnic, 150 to a business college, and the remainder plan to enter the workforce.

Use the circle below to make a pie chart showing the proportions of students planning to do each of these. Put labels on your chart.



M032695