

# TIMSS 2023 – Restricted Use Items

## Mathematics Grade 4

Benchmark 2

Content Domain: Number

Cognitive Domain: Applying

Make the number sentences true.

Drag one number card to each box.

3

5

7

8

5 +

8

is greater than 12.

20 -

3




is greater than 15.

Benchmark 2

Content Domain: Data

Cognitive Domain: Applying

Students in a class made three different origami animals using blue, red, and yellow paper. The table shows the number of animals that were made with each color paper.

Animal	Color Paper		
	Blue	Red	Yellow
 Tortoise	8	4	3
 Giraffe	3	2	10
 Fish	10	6	

Complete the table by solving this puzzle:

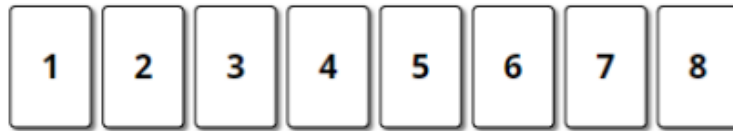
- There are the same number of blue fish as yellow giraffes.
- There are the same number of red fish as the other two red animals combined.
- There are 24 yellow animals in all.

Benchmark 3

Content Domain: Number

Cognitive Domain: Reasoning

Mark and Keith are playing a game that uses these 8 cards.



They put the cards facedown so the numbers do not show. Then each player picks 2 cards. The player with the larger sum is the winner.

Mark picks the **8** card and the **2** card. The sum is 10.

Keith first picks the **4** card.

Can Keith win the game?

(Click one box.)

Yes

No

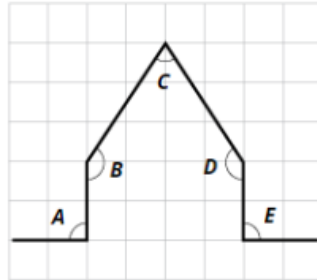
Explain your answer.

he could pick 7 or 8

Benchmark 3

Content Domain: Measurement and Geometry

Cognitive Domain: Knowing



Identify the type of each angle in the diagram. Record your answers in the table.

Angle A is already done for you.

	Right angle	Smaller than a right angle	Larger than a right angle
A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
D	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Benchmark 4

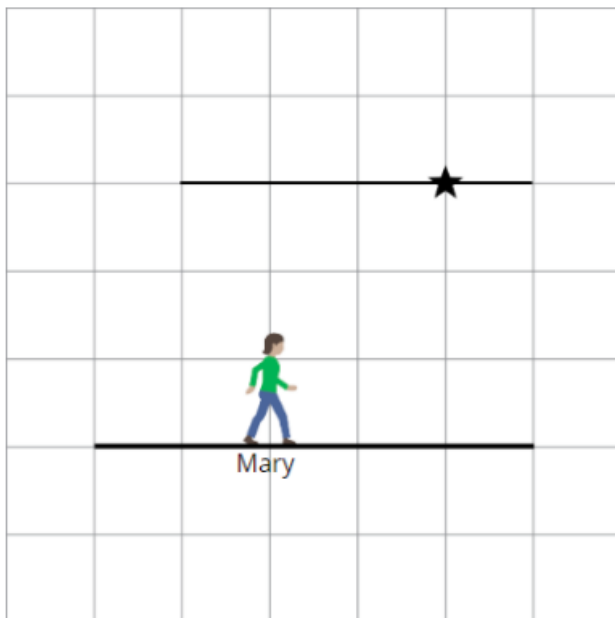
Content Domain: Measurement and Geometry

Cognitive Domain: Applying

Mary is walking along a path in the park.

There is another path in the park that is **parallel** to Mary's path and goes through the ★ .

Draw the other path.



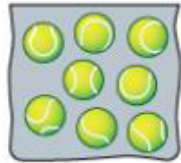
Benchmark 4

Content Domain: Number

Cognitive Domain: Applying

A sports coach needs to put 40 tennis balls and 10 soccer balls into bags.

Each bag can hold **either** 8 tennis balls **or** 2 soccer balls.



or



How can the sports coach calculate the total number of bags he will need?

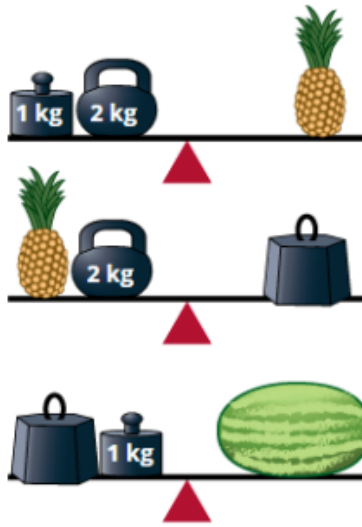
- A**  $40 + (10 \div 2)$
- B**  $(40 \div 2) + (10 \div 8)$
- C**  $(40 + 8) \div (10 + 2)$
- D**  $(40 \div 8) + (10 \div 2)$

Benchmark 4

Content Domain: Measurement and Geometry

Cognitive Domain: Reasoning

On each scale the objects on the left weigh the same as the objects on the right.



How much does the  weigh?

- A 3 kg
- B 4 kg
- C 5 kg
- D 6 kg