



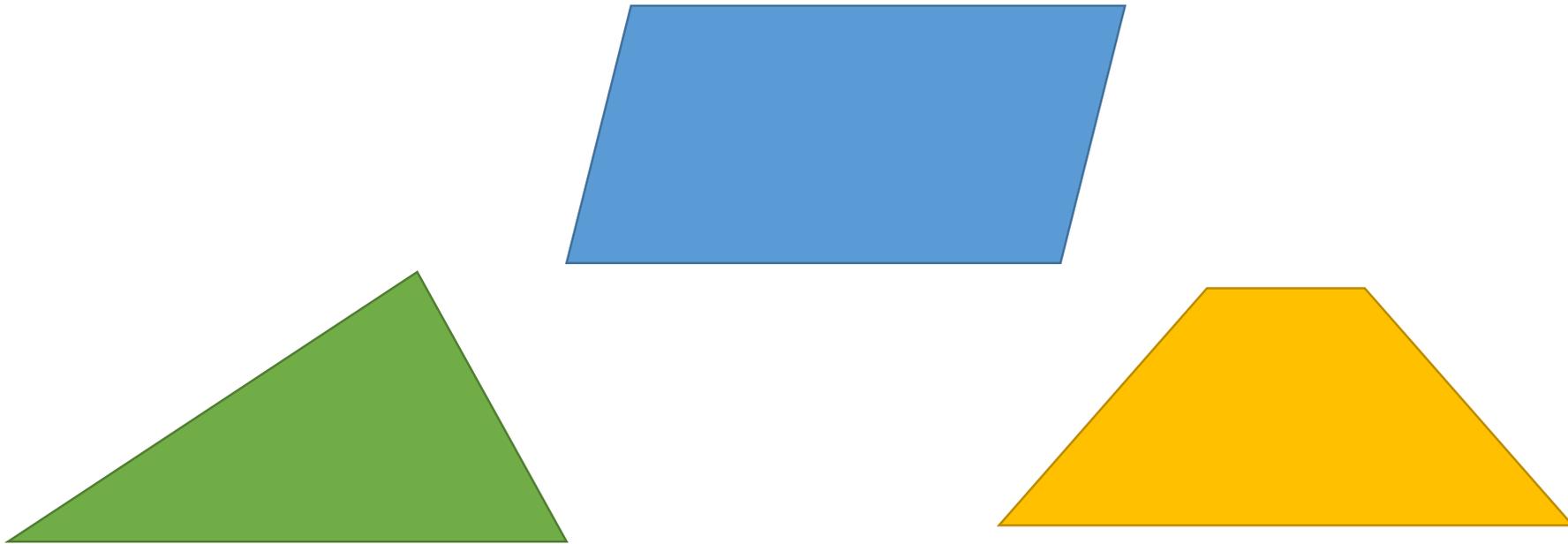
# Hong Kong Taoist Association Wun Tsuen School



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# P.5 Measures

Area of Parallelograms, Triangles and Trapeziums



# Objectives of the Lesson

- Enable students to **understand** and **apply** the formula for finding the area of parallelograms, triangles and trapeziums.

# GeoGebra Time

Area of Parallelogram



<https://www.geogebra.org/classic/qktjmhky>

Area of Triangle



<https://www.geogebra.org/classic/kstmngvg>

# Highlights of the Lesson

A. Using the same base but different height, find the area of parallelogram and triangle in the following table.

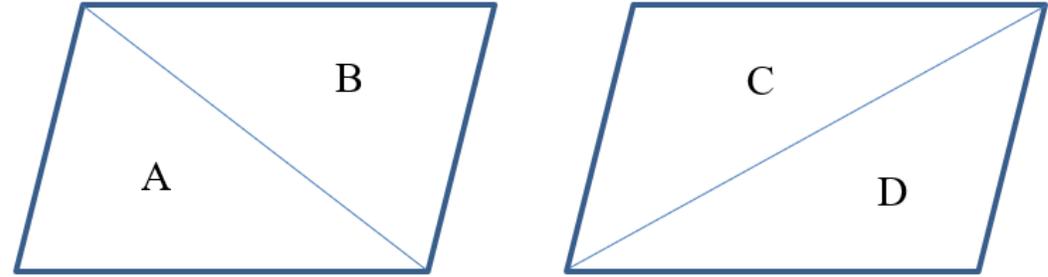
Base (cm)	Height (cm)	 Area of parallelogram	 Area of triangle
10	2		
10	3		
10	4		
10	5		
10	6		

From observation, the area of triangle is \_\_\_\_\_ of the area of parallelogram that with the same base and height.

B. Estimate the area of triangle in the following table.

Base (cm)	Height (cm)	Estimate Area of triangle	 Area of triangle
8	2		
8	3		
8	4		
8	5		

C. Hypothesis “the area of triangle is \_\_\_\_\_”.



Triangle A is ( equal to / not equal to ) Triangle B.

Triangle C is ( equal to / not equal to ) Triangle D.

A parallelogram can be cut into \_\_\_\_\_ identical triangles.

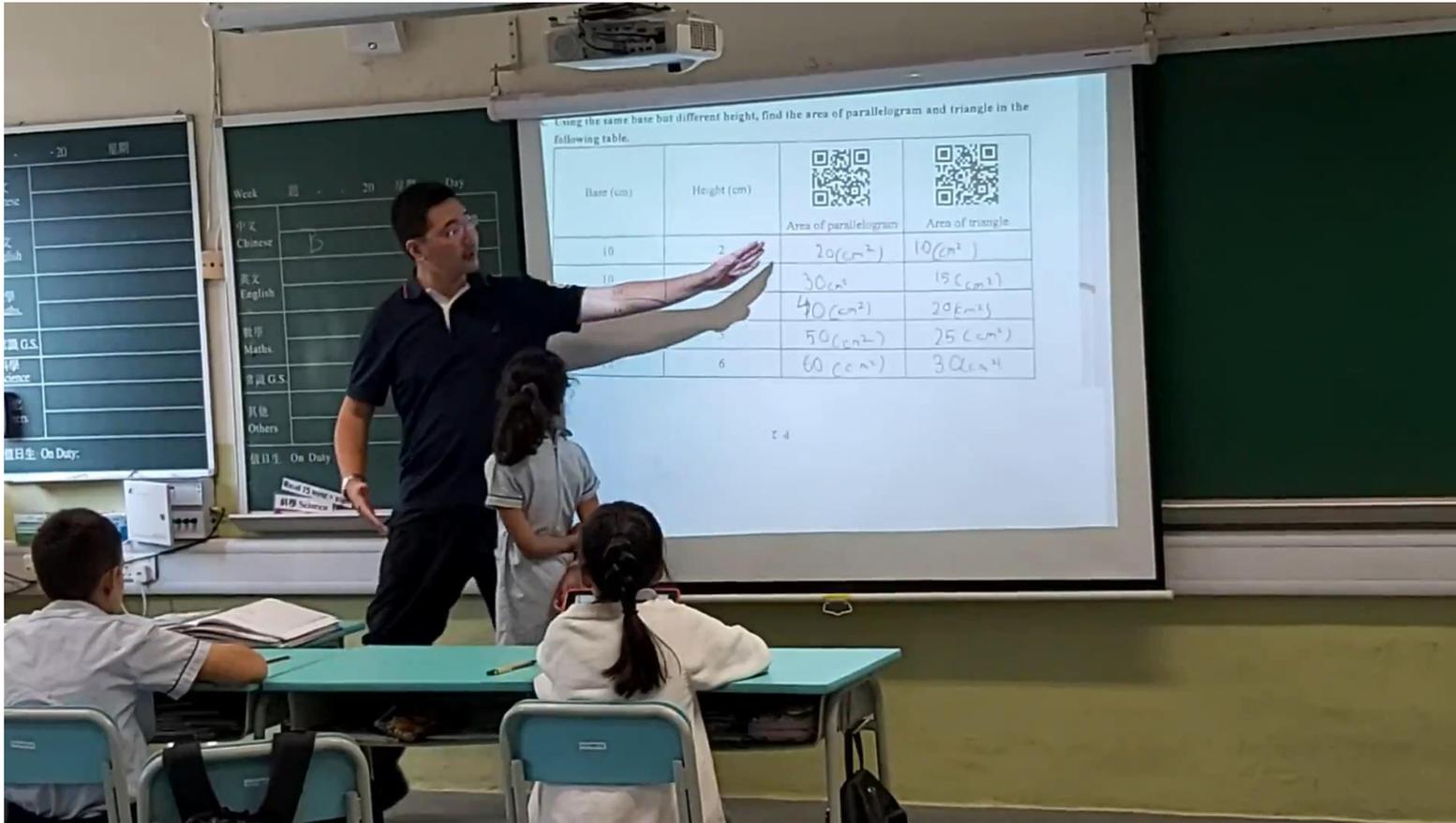
The area of triangle is \_\_\_\_\_ of the area of parallelogram with the same base and height.

The area of parallelogram is **Base × Height. (Mathematical expression)**

So, the area of the triangle is \_\_\_\_\_ . (Mathematical expression)

(with the same base and height)

# Snapshots of the Lesson



From observation, the area of triangle is  $\frac{1}{2}$  of the area of parallelogram that with the same base and height.

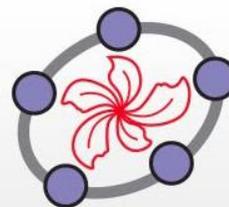
B. Estimate the area of triangle in the following table.

Base (cm)	Height (cm)	Estimate Area of triangle	Area of triangle
8	2	8	8 ✓
8	3	24	12 ✓
8	4	16	16 ✓
8	5	20	20 ✓



# Other Resources of GeoGebra

<http://www.geogebra.org.hk>



GeoGebra Institute of Hong Kong

Vision: To promote and support the use of GeoGebra and the development and sharing of its materials in Hong Kong, and to nurture collaboration between teachers, educators and researchers for a self-sustaining community of practice.

Hosting Institute: Department of Education Studies, Hong Kong Baptist University

讓數學「動」起來

- 跨平台
- 方便實用
- 配套完善
- 免費免安裝

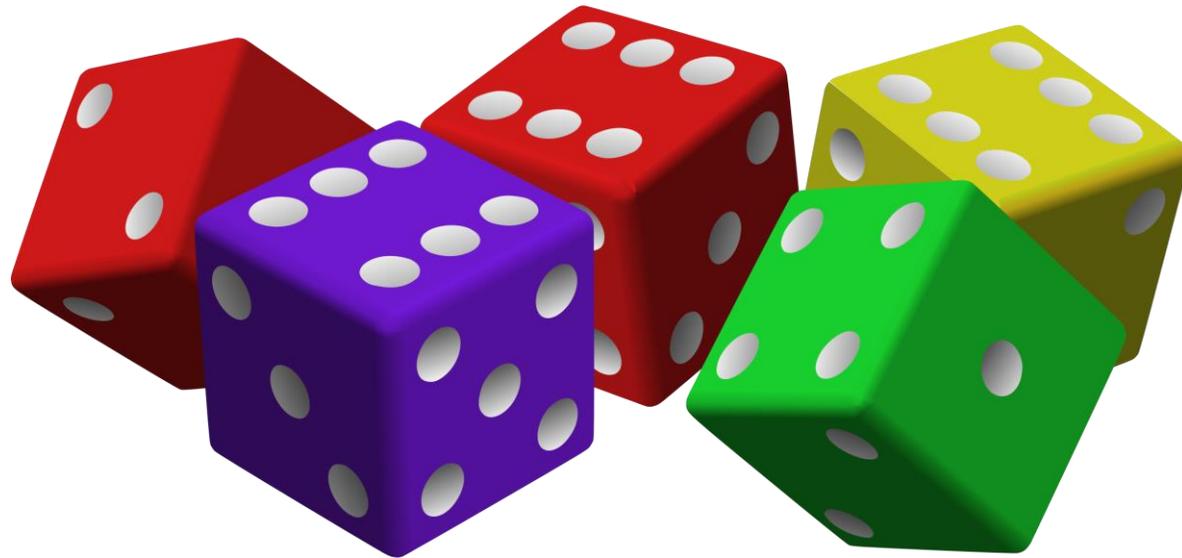
Examples of resources shown:

- Calculator:  $\frac{492-500}{500} \times 100\% = -1.6\%$ ,  $\frac{-40}{500} \times 100\% = -8\%$ ,  $\frac{-80}{500} \times 100\% = -16\%$ ,  $\frac{-100}{500} \times 100\% = -20\%$
- 3D Geometry: Pyramid with angle  $99.39^\circ$
- Trigonometry:  $\sin(238^\circ) = -\sin 58^\circ$ ,  $\cos(238^\circ) = -\cos 58^\circ$ ,  $\tan(238^\circ) = \tan 58^\circ$
- Coordinate Plane: Graph of  $y = f(x) + 3$

<https://www.gmath.hk>

# P.4 Number

Mixed Operations - Bingo



# Objective of the lesson

- ❖ Applying the use of operators.
- ❖ Raise the interests in calculation by co-operation and competition.

# Rules of the game:

- ❖ Need to use all the 4 numbers.
- ❖ Use “+”, “-”, “×”, or “÷” to make a number statement.

# Rules of the game:

- ❖ If there have two “0”, one of them can be thrown again.
- ❖ If no one find the Bingo, the team which get more number statements are correct is the winner.



花東樹屋 花東樹屋

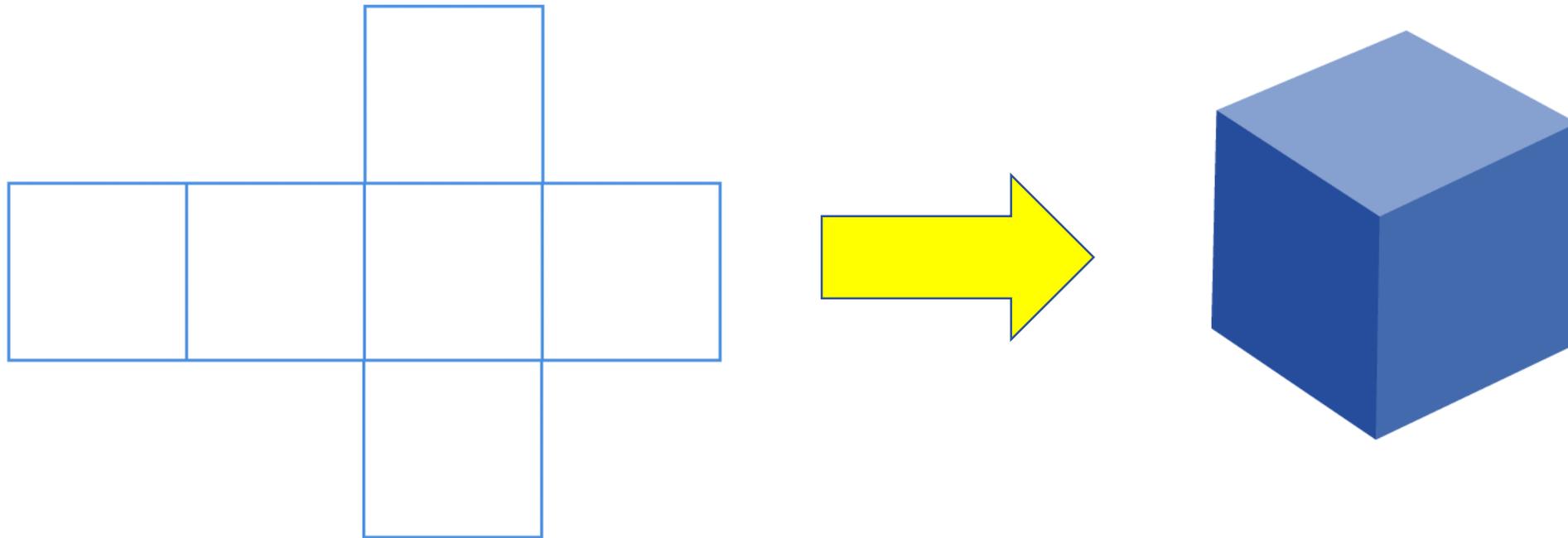


# Reflection of the lesson

❖ Students were fully engaged in the lesson.

# P.5 Shape and Space

3-D shapes – Nets of cubes

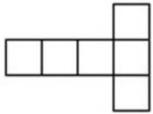
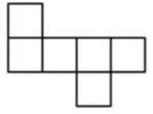
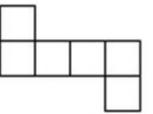
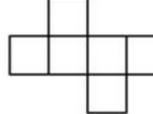
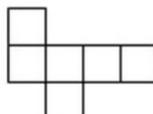
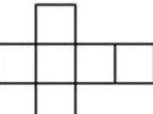
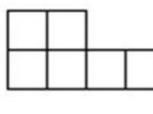
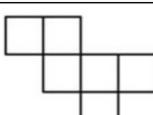
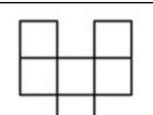
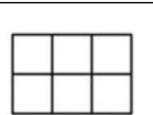
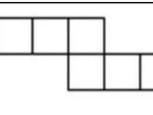


## Objectives of the Lesson

- Enable students to **recognise** the patterns of nets can fold into a cube.

# Highlights of the Lesson

A.) Try the following nets. Can these nets be folded into cubes? Put a “√” in the brackets if it can or a “x” if it cannot.

			
1. ( ) Pattern: 1-4-1	2. ( ) Pattern: 1-4-1	3. ( ) Pattern: 1-4-1	4. ( ) Pattern: 1-4-1
			
5. ( ) Pattern: 1-4-1	6. ( ) Pattern: 1-4-1	7. ( ) Pattern: 1-1-4	8. ( ) Pattern: 2-4
			
9. ( ) Pattern: 2-3-1	10. ( ) Pattern: 2-3-1	11. ( ) Pattern: 3-3	12. ( ) Pattern: 3-3

Observe the nets above again. Which pattern of nets can **always** be folded into cubes?

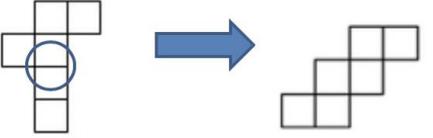
I discovered out that \_\_\_\_\_ pattern can always be folded into cubes.



# Highlights of the Lesson

B.) Exploration on non 1-4-1 nets.

Please break the net (you can refer to the hint if it is given) and turn a right angle to form another shape of nets. Record your findings.

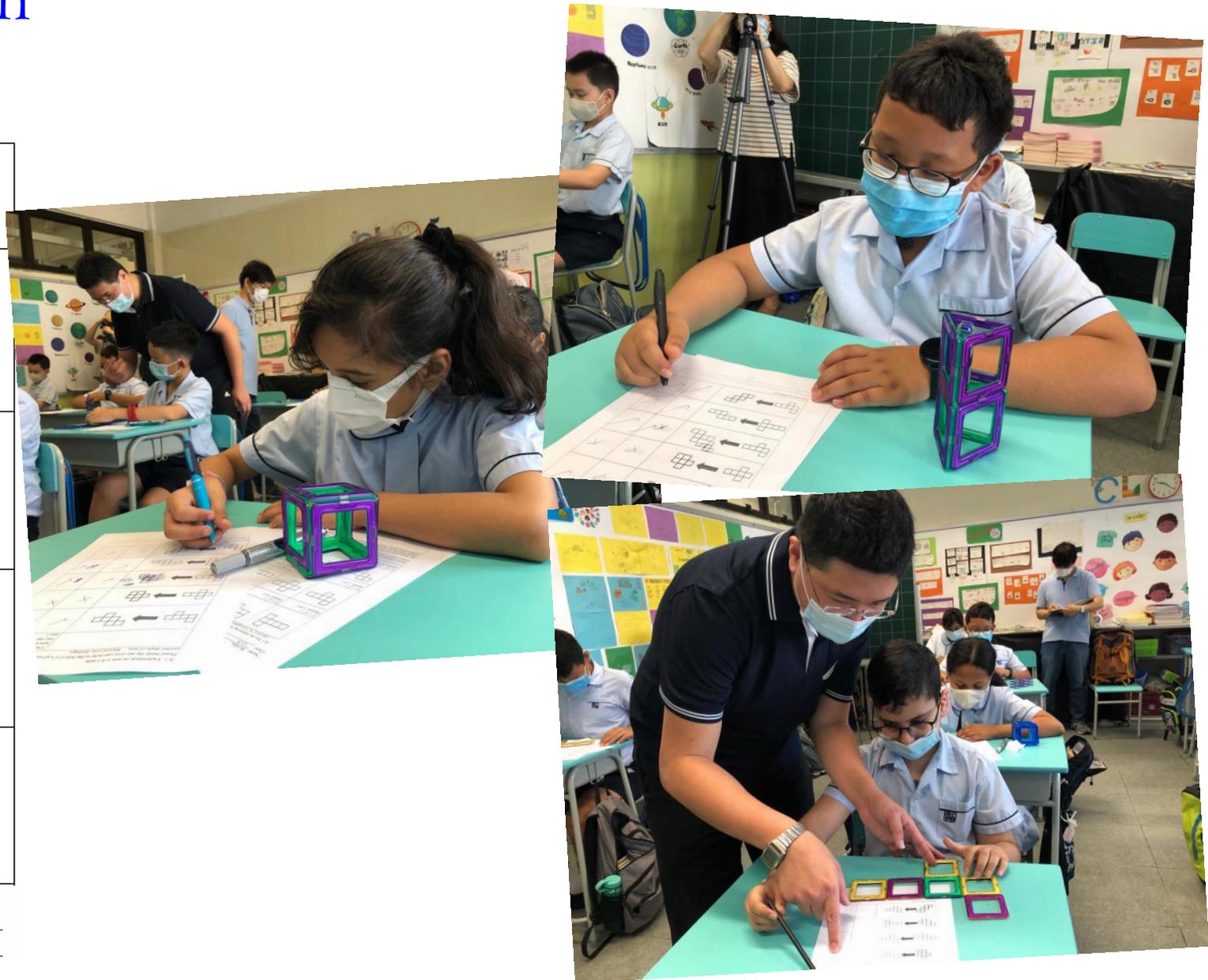
	Can the original nets be turned into the new nets?	Can the new nets be turned into the cubes?
		
		
		
		

What can you discover?

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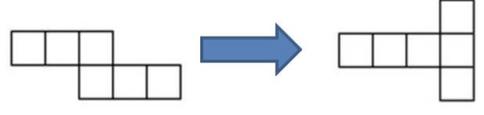
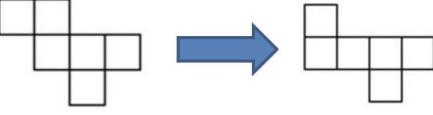
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# Highlights of the Lesson

C.) Exploration on non 1-4-1 nets back to 1-4-1 nets.

Please break the net (you can refer to the hint if it is given) and turn a right angle to form another shape of nets. Record your findings.

	Can the original nets be turned into the new nets?	Can the new nets be turned into the cubes?
		
		
		
		

What can you discover?

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