



COMPETITIVE KIDS STEM

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大灣盃

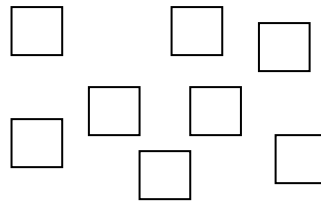
粵港澳大灣區數學競賽（香港賽區） GUANGDONG-HONG KONG-MACAO GREATER BAY AREA MATHEMATICAL OLYMPIAD (HONG KONG REGION)

大灣盃 模擬試題（所有組別）

Big Bay Bei Sample Questions (ALL Groups)

幼稚園組/ Kindergarten Group

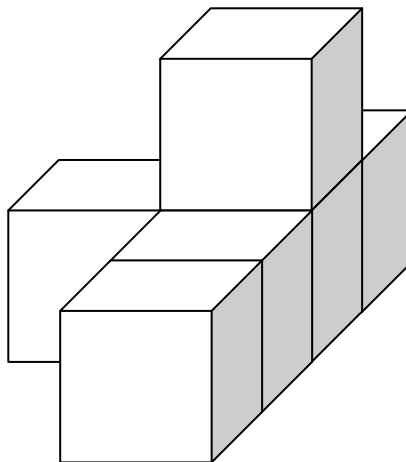
1. 請問下圖中有多少個正方形？
How many squares are there?



2. 填上適當的數字。
Fill in a suitable number.

$$4 + 1 = \square + 2$$

3. 下圖共有多少個正方體？
How many cubes are there?



小學初年級組（小一至小二） / Junior Primary Group (Primary 1 to 2)

1. 填上適當的數字。

Fill in suitable number.

$$1 \quad 4 \quad + \quad \boxed{} \quad \boxed{} \quad = \quad 6 \quad 8$$

2. 根據下圖規律，求下一幅圖。

According to the following pattern, find the next figure.

○ □ △ ○ □ △ ○ □ △ ○ _ △ ...

3. 小冰有糖 10 顆，小權有糖 18 顆，請問小權要給多少顆糖小冰，才能使他們有同樣多的糖？

Ice has 10 candies and Kuen has 18 candies. How many candies are required for Kuen to give to Ice so that they have the same number of candies?

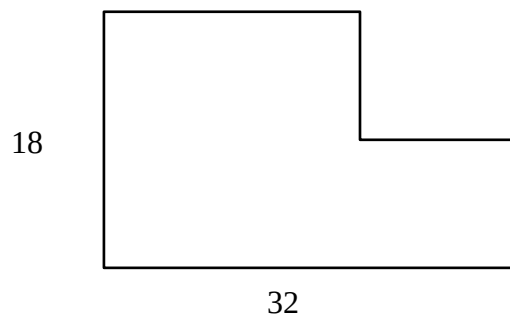
小學中年級組（小三至小四） / Middle Primary Group (Primary 3 to 4)

1. 求 $2+3+4+\dots+23+24+25$ 的值。

Find the value of $2+3+4+\dots+23+24+25$.

2. 求下圖的周界。

Find the perimeter of the following figure.



3. 小冰與小權共有 57 枝鉛筆，小權比小冰多 13 枝，請問小冰有多少枝鉛筆？

Kuen and Ice have 57 pencils altogether. Kuen has 13 more than Ice. How many pencils does Ice have?

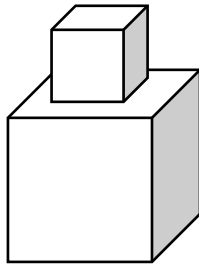
小學高年級組（小五至小六） / Senior Primary Group (Primary 5 to 6)

1. 求 $1,111 \times 1,111$ 的值。

Find the value of $1,111 \times 1,111$.

2. 下圖的立體由兩個正方體組成。大正方體的棱長是 6 厘米，頂上的小正方體棱長是 4 厘米。求該立體的體積。

The following figure is formed by 2 cubes. The edge of the large cube is 6cm. The edge of the small cube is 4cm. Find the volume of the following figure.



3. 用 1、2、3 和 4 可以組成多少個沒有重覆數字的四位數？

By using 1, 2, 3 & 4, how many 4-digit numbers can be formed without repeated numbers?

中學初年級組（中一至中二） / Junior Secondary Group (Secondary 1 to 2)

1. 求 $3.\dot{5}\dot{3} - 2.\dot{0}\dot{1}\dot{8}$ 的值，並以循環小數表示答案。

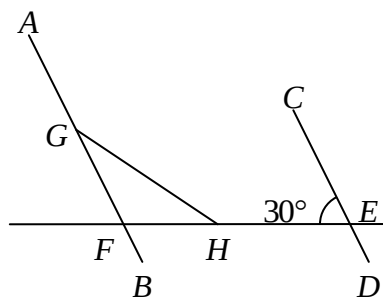
Find the value of $3.\dot{5}\dot{3} - 2.\dot{0}\dot{1}\dot{8}$ and show your answer in recurring decimals.

2. 求數值 2019 的正因子和。

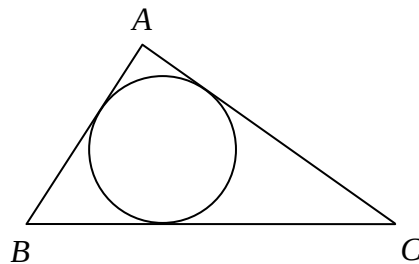
Find the sum of all positive factors of 2019.

3. 參考附圖， $AB \parallel CD$ ， $FG = FH$ 。若 $\angle AGH = x^\circ$ ，求 x 的值。

In the figure below, if $AB \parallel CD$ ， $FG = FH$ and $\angle AGH = x^\circ$ ，find the value of x .



- 若 $\sin A + \cos A = \frac{1}{5}$ ，求 $\sin A \cos A$ 的值。
If $\sin A + \cos A = \frac{1}{5}$, find the value of $\sin A \cos A$.
- 若 $x < 0$ 且 $|x-6| + |x+2| = 9$ ，求 x 的值。
Find the value of x if $x < 0$ and $|x-6| + |x+2| = 9$.
- 參考附圖，圓內接於三角形 ABC 中。若 $AB = 30$ 、 $BC = 50$ 和 $\angle BAC = 90^\circ$ ，求內接圓的半徑。
In the figure below, a circle is inscribed in $\triangle ABC$, if $AB = 30$, $BC = 50$ and $\angle BAC = 90^\circ$, find the radius of the inscribed circle.



答案/ Answer

幼稚園組/ Kindergarten Group	小學組/ Primary Group	中學組/ Secondary Group
1. 8	小學初年級組/ Junior Primary Group	中學初年級組/ Junior Secondary Group
2. 3	1. 54	1. $3.\dot{5}1733\dot{5}$
3. 6	2. $\square$	2. 2696
	3. 4	3. 165
	小學中年級組/ Middle Primary Group	中學高年級組 Senior Secondary Group
	1. 324	1. $-\frac{12}{25}$
	2. 100	2. $-\frac{5}{2}$
	3. 22	3. 10
	小學高年級組/ Senior Primary Group	
	1. 1,234,321	
	2. 280	
	3. 24	