

THE HONG KONG JOCKEY CLUB SERIES

香港賽馬會呈獻系列

7.12.2018 - 10.4.2019

匠 心 獨 運

*Treasures
of Time*

鐘錶珍寶展

趣味習作
Activity Sheet

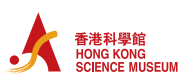
小學學生適用
For primary students



聯合主辦
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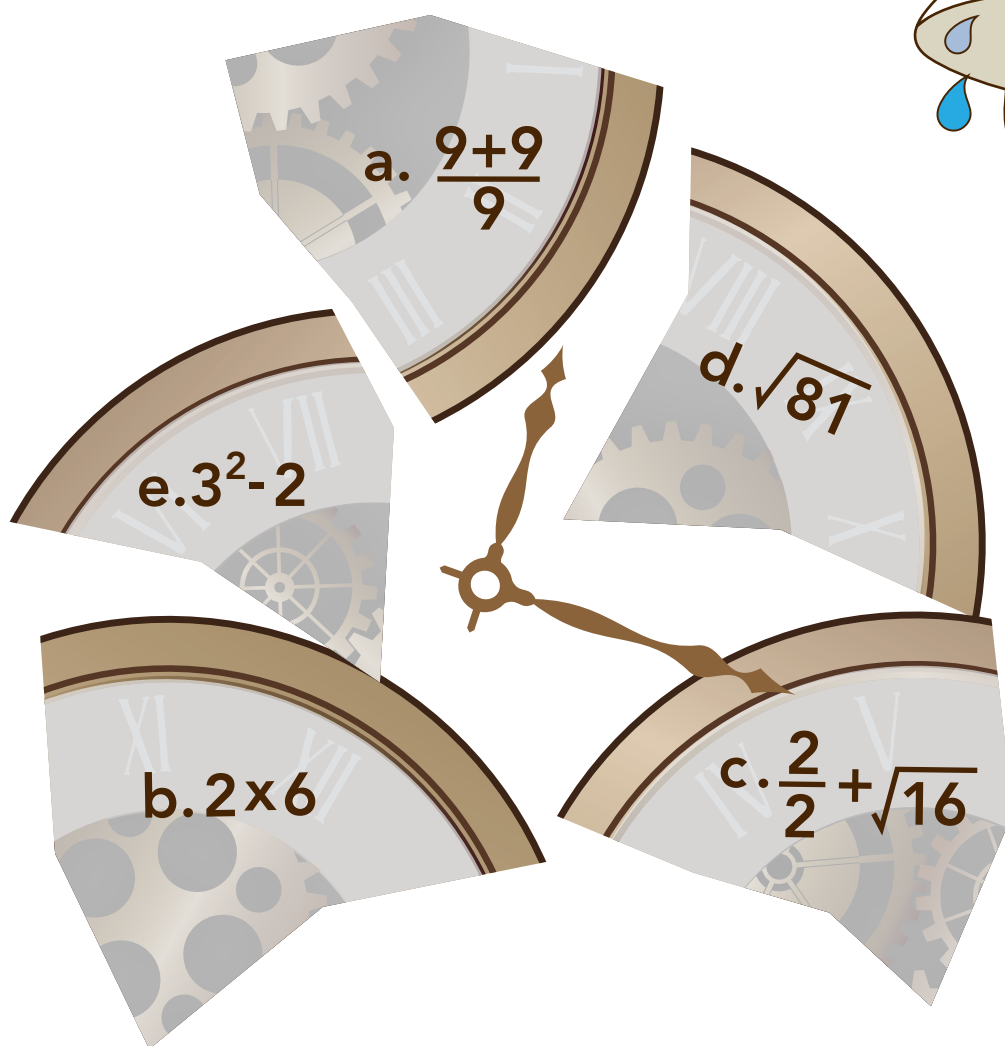


特別的鐘面

An Unusual Clock Face

小皇帝收到了一個鐘面是用數學算式表示的鐘，可惜他不小心把它打碎了。你可以根據碎片上的算式計算答案，協助鐘錶匠把鐘修補嗎？

The Emperor has received an unusual clock which has mathematical expressions instead of numbers on the clock face. Unfortunately, he has accidentally broken it. Can you help the clockmaker solve the expressions to obtain the numerical answers so that he can repair the clock?



a. _____

b. _____

c. _____

d. _____

e. _____

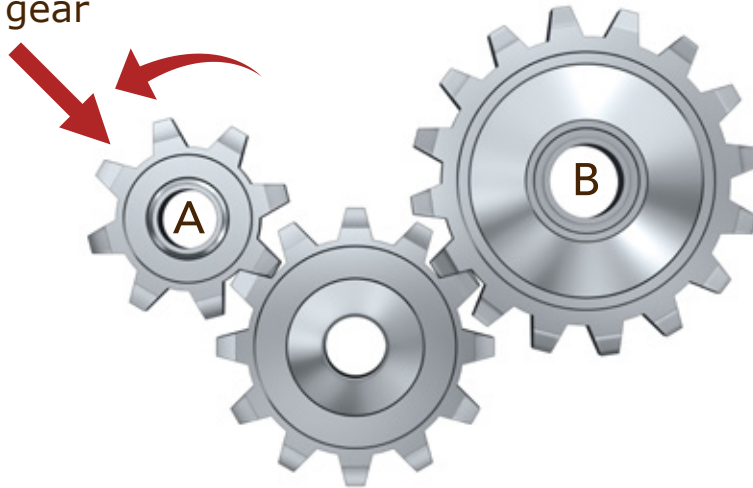
齒輪的運作 How Gears Operate

小皇帝在研究機械鐘錶內的齒輪，請你幫他解答以下題目。

The Emperor is looking into the gears of mechanical clocks. Please help him solve the following questions.

驅動輪

Driving gear



B 齒輪比 A 齒輪轉得 **快/慢**，因為 B 齒輪的齒數較 **多/少**。

Gear B rotates **faster / slower** than Gear A because Gear B has **more / fewer** teeth on it.



這齒輪組的齒輪比是 The gear ratio of this gear train is:

根據上圖，B 齒輪是以 **順時針/逆時針** 方向轉動。

According to the diagram, Gear B rotates in **clockwise/anti-clockwise** direction.



小提示 Hint

齒輪比 **Gear Ratio** =

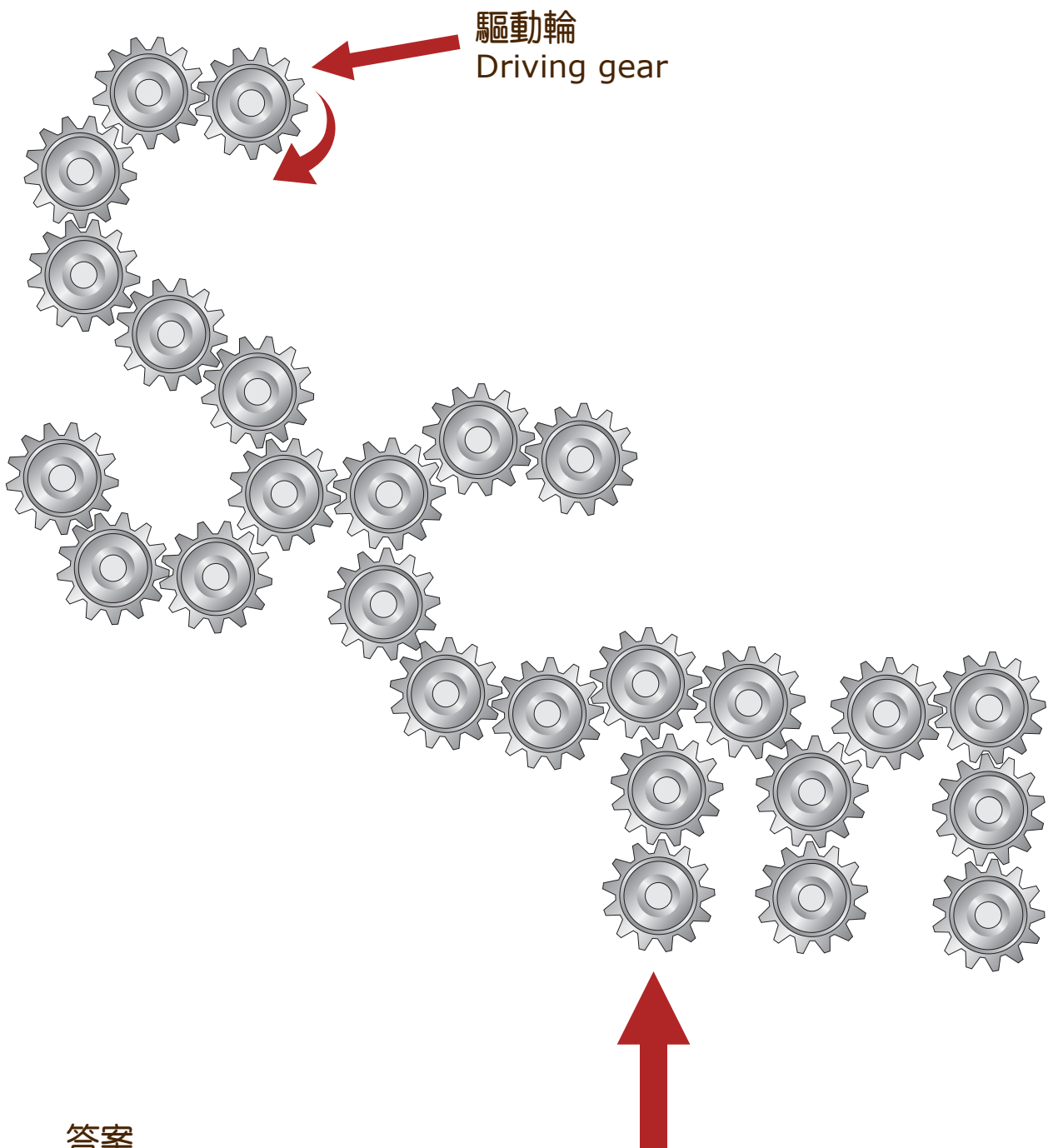
驅動輪齒數 Number of teeth on driving gear

受動輪齒數 Number of teeth on driven gear

小挑戰 Small Challenge

下圖為一組齒輪，驅動輪以順時針方向轉動，箭嘴所指的齒輪以甚麼方向轉動？

A gear train is shown below. The driving gear is rotating in a clockwise direction. What is the rotation direction of the gear pointed by the arrow?



答案

Answer _____

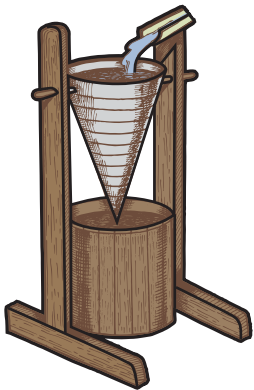
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古代計時儀器 Ancient Timekeeping Instruments

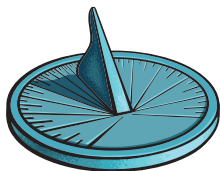
在發明鐘錶之前，古人用不同的儀器計時及報時。你認識以下工具嗎？試用線連上它們相應的功能。

Before the invention of clocks and watches, people used different instruments to keep and tell time. Do you know which of the following instruments were used to keep time, and which ones to tell time? Use lines to join the instruments to the corresponding function.

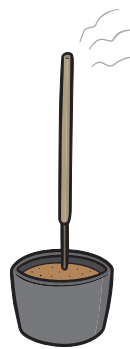
計時 Keep time



水鐘
Clepsydra



日晷
Sundial



香
Incense stick



沙漏
Hourglass

報時 Tell time

那裏是什麼時間？ What's the Time There?

小皇帝想將一些收藏的鐘送給世界各地的朋友，但他不知道那些地方的時間，你可以幫他在後頁各個時鐘上畫出時針和分針以顯示正確的時間嗎？

The Emperor wants to give away some clocks as gifts to his friends. However, he does not know the correct time of his friends' locations. Please help him finish the work by drawing the hands of the clocks on the following pages.



現在是中國北京時間下午 5 時 30 分。
It is now 5:30 pm in Beijing,
China.(UTC+8)





送往英國倫敦 Clock to London, England(UTC + 1)



送往法國巴黎 Clock to Paris, France(UTC + 2)





送往中國廣州 Clock to Guangzhou, China(UTC+8)



你知道為甚麼世界各地會有時差嗎？

Do you know why there is time difference
between different locations on Earth?

送給皇帝的禮物

Present to the Emperor

小皇帝的生日快到了。你打算為他設計一台鐘，把你的設計繪畫在下面空白地方，並加上文字描述它的特點。

The birthday of the Emperor is coming up. You are planning to design a new clock for him. Draw your design in the space below and write some descriptions of its special features.