Paper 1 Section A(1)
卷一甲部 (1)

Example 例題：

1. Simplify $\frac{(ab^{-4})^2}{b^3}$ and express your answer with positive indices. (3)

   化簡 $\frac{(ab^{-4})^2}{b^3}$，並以正指數表示答案。(3)

snapask

2. Factorize 因式分解 (1+2)

(a) $x^2 - 3x - 4$,

(b) $xy^3 + y^3 + x^2 - 3x - 4$.

snapask

3. (a) Round up 454.54 to 2 significant figures. (1+1+1)
將 454.54 上捨入至兩位有效數字。(1+1+1)

(b) Round off 454.54 to 1 decimal place.
將 454.54 捨入至一位小數。

(c) Round down 454.54 to the nearest integer.
將 454.54 下捨入至最接近的整數。

snapask

4. Consider the formula $3(2a - b) = 4a + 2$. (2+2)
考慮公式 $3(2a - b) = 4a + 2$。(2+2)

(a) Make b the subject of the above formula.
令 b 成為上述公式的主項。

(b) If the value of a is increased by 3, write down the change in the value of b.
若 a 的值增加 3，寫出 b 的值的改變。

snapask

5. In a chess club, there are 270 members and the number of male members is 25% more than the number of female members. Find the difference of the number of male members and the number of female members. (4)
某棋藝學會有 270 名會員且男會員人數較女會員人數多 25%。求男會員人數與女會員人數之差。(4)

snapask

6. Let $f(x) = 3x^3 + 10x^2 - 9x + k$, where k is a constant. When f(x) is divided by x – 3, the remainder is 140. (3+2)
設 $f(x) = 3x^3 + 10x^2 - 9x + k$，其中 k 為一常數。當 f(x) 除以 x – 3 時，餘數為 140。(3+2)

(a) Is x – 1 a factor of f(x)? Explain your answer.
x – 1 是否 f(x) 的因式？解釋你的答案。

(b) Someone claims that all the roots of the equation f(x) = 0 are rational numbers. Do you agree? Show your works.
某人宣稱方程 f(x) = 0 所有的根均為有理數。你是否同意？解釋你的答案。

snapask

7. The coordinates of the points A and B are (–2, 6) and (3, –4) respectively. A is rotated anticlockwise about the origin O through 270° to A'. B is translated leftward by 9 units to B'. (2+3)
點 A 及點 B 的坐標分別爲 (–2, 6) 及 (3, –4)。A 繞原點 O 逆時針方向旋轉 270° 至 A'。B 向左平移 9 單位至 B'。(2+3)

(a) Write down the coordinates of A' and B'.
寫出 A'及 B'的坐標。

(b) Prove that AB is perpendicular to A'B'.
證明 AB 垂直於 A'B'。

snapask

8. The table below shows the distribution of the number of books read by some students this month. (3)
下表顯示一些學生當月閱讀書本的數目的分佈。(3)

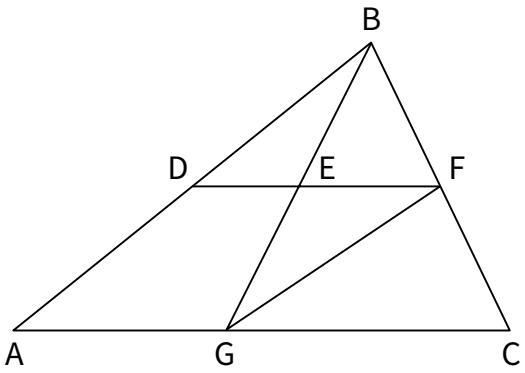
Number of books 書本的數目	0	1	2	3
Number of students 學生人數	9	18	12	1

Find the median, the mode and the standard deviation of the above distribution.
求上述分佈的中位數、眾數及標準差。

snapask

9. In the figure below, D, F and G are points lying on AB, BC and AC respectively. BG and DF intersect at the point E. It is given that BC = BG, AB//GF, ∠CAB = 34° and ∠CBG = 56°. (3+2)

在圖下中，D、F 及 G 分別為 AB、BC 及 AC 上的點。BG 及 DF 相交於點 E。已知 BC = BG、AB//GF、∠CAB = 34° 及∠CBG = 56°。(3+2)



(a) Find 求∠ABG.

(b) Let ∠BDF = θ. Express ∠FEG in terms of θ.
設∠BDF = θ。以 θ 表∠FEG。

snapask