



## Junior Secondary Mathematics Curriculum (S1 – S3)

### Learning Unit 11 - Polynomials Active Learning Lesson Activity

#### Teacher's demonstration and explanation

Teacher's Activity	Students' Activity
<p><b>Teacher:</b></p> <p><b>YoTeach!</b> will be used to demonstrate operation of polynomials.</p> <p>Perform addition of simple polynomials  <math>5x + 3x</math>  <math>= 8x</math></p> <p>Perform subtraction of simple polynomials  <math>4x - 2x</math>  <math>= 2x</math></p> <p>Perform addition and subtraction of more complicated polynomials</p> <p><b>Example 1:</b></p> $5x + 3x - 2x = 8x - 2x = 6x$ <p><b>Example 2:</b></p> $8x + 3y + 2x - 3y = 8x + 2x + 3y - 3y = 10x$ <p><b>Example 3:</b></p> $\begin{aligned} & -9xy^2 + 21x^2y - 3x^2 + 2y^2 - 4x^2y + 6y^2x \\ & = -9xy^2 + 6xy^2 + 21x^2y - 4x^2y - 3x^2 + 2y^2 \\ & = -3xy^2 + 17x^2y - 3x^2 + 2y^2 \end{aligned}$ <p><b>Example 4:</b></p> <p>After example 1, 2, and 3 are done the teacher will ask students to simplify the following polynomial on their own:</p> $5ab - 2a^2b + 6ab^2 - 7ab - 3ab^2 + 9a^2b$ <p>Teacher will ask students to write down their solutions in <b>YoTeach!</b>.</p> <p>Teacher will check all the solutions of students, identify the correct answers, and go over closely which ones are incorrect.</p>	<p><b>Students:</b></p>  <p><a href="https://yoteachapp.com/">https://yoteachapp.com/</a></p> <p>Enter the room by scanning the QR code and entering the pin: <b>51272215</b>.</p> <p>Observe and work out according to teacher's demonstration.</p> <p>Students can ask questions through <b>YoTeach!</b>.</p> 

## 初中數學課程 (中一至中三)

### 學習單元 11 - 多項式 主動學習課堂活動

#### 老師的教學示範及解釋

老師的教學活動	學生的學習活動
<p><b>老師:</b></p> <p>以 <b>YoTeach!</b> 作為渠道示範多項式運算。</p> <p>示範簡單多項式的加法  <math>5x + 3x</math>  <math>= 8x</math></p> <p>示範簡單多項式的減法  <math>4x - 2x</math>  <math>= 2x</math></p> <p>示範複雜的多項式的加減運算</p> <p><b>例題 1:</b></p> $5x + 3x - 2x = 8x - 2x = 6x$ <p><b>例題 2:</b></p> $8x + 3y + 2x - 3y = 8x + 2x + 3y - 3y = 10x$ <p><b>例題 3:</b></p> $\begin{aligned} & -9xy^2 + 21x^2y - 3x^2 + 2y^2 - 4x^2y + 6y^2x \\ & = -9xy^2 + 6xy^2 + 21x^2y - 4x^2y - 3x^2 + 2y^2 \\ & = -3xy^2 + 17x^2y - 3x^2 + 2y^2 \end{aligned}$ <p><b>例題 4:</b></p> <p>老師完成示範例題 1、2 和 3 之後，將要求學生們自行簡化以下多項式：</p> $5ab - 2a^2b + 6ab^2 - 7ab - 3ab^2 + 9a^2b$ <p>老師會要求學生們在 <b>YoTeach!</b> 上寫下他們的答案。</p> <p>老師將會檢查學生們的所有答案，檢視正確的答案，並仔細檢查哪些答案不正確。</p>	<p><b>學生:</b></p>  <p><a href="https://yoteachapp.com/">https://yoteachapp.com/</a></p> <p>掃描 QR 碼並輸入 PIN: <b>51272215</b> 以進入房間</p> <p>觀察並根據老師的示範嘗試解答問題</p> <p>學生可以通過 <b>YoTeach!</b> 向老師提問</p> 