

## Chapter 5 Algebraic Manipulation

### Class Activity 1

#### Questions

1. Classify the following expressions into different groups based on their variable parts.



$4x$  and  $-5x$ ,  $3y$  and  $7y$ ,  $x^2$  and  $3x^2$ ,  $-6xy$  and  $3xy$ .

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2. There are some pink sticks of length  $x$  cm each and some green sticks of length  $y$  cm each.



Using the given models, express the results of the following as simply as possible.

(a)



- |   |       |
|---|-------|
| (i) $AB$ is formed by 2 pink sticks. Find the length of $AB$ .        | 2x cm |
| (ii) $CD$ is formed by 3 pink sticks. Find the length of $CD$ .       | 3x cm |
| (iii) If $AB$ and $CD$ are joined together, what is the total length? | 5x cm |
| (iv) Find $2x + 3x$ .   | 5x    |

(b)



- |  |       |
|--|-------|
| (i) $EF$ is formed by 5 green sticks. Find the length of $EF$ .                              | 5y cm |
| (ii) $GH$ is formed by 2 green sticks. Find the length of $GH$ .                             | 2y cm |
| (iii) If a part of length $GH$ is cut off from $EF$ , find the length of the remaining part. | 3y cm |
| (iv) Find $5y - 2y$ .  | 3y    |
- (c) If  $AB$  and  $EF$  are joined together, what is the total length? (2x + 5y) cm

**Note:** The expression in  $x$  and  $y$  obtained in (c) cannot be further simplified.