**Year 7 Maths 12.08 (Collecting Like Terms)**

**Part 1**

Violet Beauregarde is visiting the chocolate factory. Willy Wonka gives Violet a bag with an unknown number of lollies in it. He also hands her 4 extra “spare” lollies.

1. Draw a picture to represent the number of lollies Violet has below.

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1. Write an algebraic expression to represent this situation. Define the unknown that you use.
2. Visit the link [here](https://mathsbot.com/manipulatives/tiles) and create the algebraic expression using algebra tiles. Draw the algebra tiles below

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Violet opens the bag and realises there are 15 lollies in the bag.

1. How many lollies does Violet have in total?

**Part 2**

Wonka gives Augustus Gloop 3 bags of lollies and 2 extra “spare” lollies

1. Write an algebraic expression to represent the number of lollies Augustus has. Define the unknown that you use.
2. Visit the link [here](https://mathsbot.com/manipulatives/tiles) and create the algebraic expression using algebra tiles. Draw the algebra tiles below

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An Oompa Loompa says that he can triple the numbers of lollies that Augustus has

1. Write an algebraic expression to represent the number of lollies Augustus now has.

Augustus opens the bags and realises that there are 3 lollies in each bag.

1. How many lollies does Augustus have in total?

**Part 3**

Wonka gives Veruca Salt the following:

* 1 bag of lollies with an unknown number of lollies in it.
* 1 bag of lollies with a **different** *unknown* number of lollies in it
* 3 spare lollies

1. Draw a picture to represent the number of lollies Veruca Salt has below.

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1. Write an algebraic expression to represent this situation. Define the unknown**s** that you use.
2. Visit the link [here](https://mathsbot.com/manipulatives/tiles) and create the algebraic expression using algebra tiles. Draw the algebra tiles below

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Veruca opens the bags and realises that there are 4 lollies in the first bag and 7 in the other.

1. How many lollies does Veruca have in total?

**Part 4**

Wonka gives Mike Teevee the following:

* 2 bags of lollies with an unknown number of lollies in it.
* 3 bags of lollies with a **different** *unknown* number of lollies in it
* 1 spare lolly

1. Write an algebraic expression to represent this situation. Define the unknown**s** that you use.
2. Visit the link [here](https://mathsbot.com/manipulatives/tiles) and create the algebraic expression using algebra tiles. Draw the algebra tiles below

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Mike opens the bags and realises that there are 2 lollies in the first bag and 4 in the other.

1. How many lollies does Mike have in total?

**Part 5**

Wonka gives Charlie Bucket a bag with an unknown number of lollies in it. He says that if Charlie doesn’t give Mr. Slughworth the *Everlasting Gobstopper* he will multiply the number of lollies by the same unknown amount.

1. Write an expression to represent this situation
2. If the number of lollies in the bag is 5 **and** Charlie does not give Mr. Slugworth the Everlasting Gobstopper, how many lollies will Charlie get?