Name : _____ Score : _____

Draw: S1

# Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) The students in an elementary school have the following features:
   - 18 students have only blond hair;
   - 25 students have only blue eyes;
   - 11 students have only long hair;
   - 16 students have blond hair with blue eyes but not long hair;
   - 8 students have blue eyes with long hair but do not have blond hair;
   - 4 students have long and blond hair but not blue eyes;
   - 5 students have blue eyes with long and blond hair; and
   - 7 students do not have blue eyes, blond hair or long hair.

a) How many students have blond hair and blue eyes? _____

b) What is the total strength of the elementary school? _____

c) Find the number of students who have blue eyes and long hair. _____

d) How many students do not have blond hair? _____

e) List down the number of students who have neither blue eyes nor blonde hair. _____

f) How many students do not have blue eyes? _____

g) Write down the number of students who have either blue eyes or long hair. _____

h) Find the number of students who have at least 2 of the 3 features provided in the data. _____

Name : _____ Score : _____

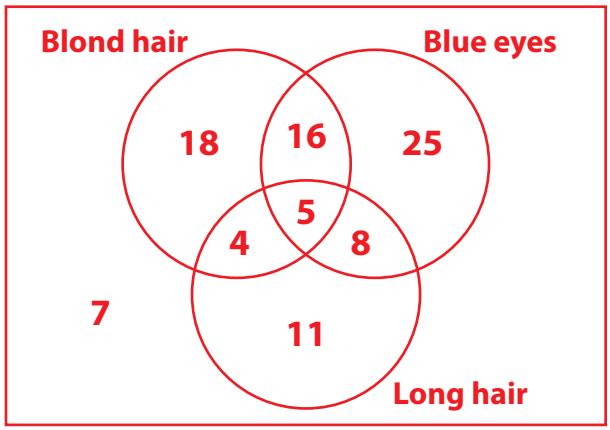
**Answer key**

Draw: S1

## Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) The students in an elementary school have the following features:
   - 18 students have only blond hair;
   - 25 students have only blue eyes;
   - 11 students have only long hair;
   - 16 students have blond hair with blue eyes but not long hair;
   - 8 students have blue eyes with long hair but do not have blond hair;
   - 4 students have long and blond hair but not blue eyes;
   - 5 students have blue eyes with long and blond hair; and
   - 7 students do not have blue eyes, blond hair or long hair.




a) How many students have blond hair and blue eyes? **21 students**

b) What is the total strength of the elementary school? **94 students**

c) Find the number of students who have blue eyes and long hair. **13 students**

d) How many students do not have blond hair? **51 students**

e) List down the number of students who have neither blue eyes nor blonde hair. **18 students**

f) How many students do not have blue eyes? **40 students**

g) Write down the number of students who have either blue eyes or long hair. **69 students**

h) Find the number of students who have at least 2 of the 3 features provided in the data. **33 students**

Name : _____ Score : _____

Draw: S2

# Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) The local pizzeria received orders for the following pizzas:
   - 28 customers ordered for only cheese pizzas;
   - 37 customers placed orders exclusively for pepperoni pizzas;
   - 35 customers ordered for only chicken sausage pizzas;
   - 19 customers ordered for cheese and pepperoni pizzas but not chicken sausage pizzas;
   - 1 customer placed orders for chicken sausage pizzas and pepperoni pizzas but not for cheese pizzas;
   - 9 customers ordered for chicken sausage pizzas and cheese pizzas but not for pepperoni pizzas;
   - 2 orders were placed for all three types of pizzas; and
   - 3 customers at the pizzeria did not place orders for pizzas.



a) Find the number of cu _____

b) How many orders did _____

c) Find the number of or sausage or pepporon _____

d) How many orders we _____

e) Write down the number of orders that were placed for either pepperoni or chesse pizzas. _____

f) How many orders were placed for either cheese or chicken sausage pizzas? _____

g) Write down the orders that were placed for cheese and pepperoni pizzas. _____

h) How many customers placed orders for chicken sausage and pepperoni pizzas but not cheese pizzas? _____

Name : _____ **Answer key** Score : _____

Draw: S2

## Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) The local pizzeria received orders for the following pizzas:
   - 28 customers ordered for only cheese pizzas;
   - 37 customers placed orders exclusively for pepperoni pizzas;
   - 35 customers ordered for only chicken sausage pizzas;
   - 19 customers ordered for cheese and pepperoni pizzas but not chicken sausage pizzas;
   - 1 customer placed orders for chicken sausage pizzas and pepperoni pizzas but not for cheese pizzas;
   - 9 customers ordered for chicken sausage pizzas and cheese pizzas but not for pepperoni pizzas;
   - 2 orders were placed for all three types of pizzas; and
   - 3 customers at the pizzeria did not place orders for pizzas.



a) Find the number of cu _____ **58 customers**

b) How many orders did _____ **75 orders**

c) Find the number of or sausage or pepporon _____ **103 orders**

d) How many orders we _____ **31 orders**

e) Write down the number of orders that were placed for either pepperoni or chesse pizzas. _____ **96 orders**

f) How many orders were placed for either cheese or chicken sausage pizzas? _____ **94 orders**

g) Write down the orders that were placed for cheese and pepperoni pizzas. _____ **21 orders**

h) How many customers placed orders for chicken sausage and pepperoni pizzas but not cheese pizzas? _____ **1 order**

Name : _____ Score : _____

# Drawing Venn Diagram - With Universal Set

Draw: S3

Draw Venn diagram based on the data provided and answer the questions that follow.

1) A survey was conducted in Westpoint to find the number of pet owners in the neighborhood. As per the survey -
   - 31 families have only dogs as pets;
   - 34 families have only cats as pets;
   - 15 families keep only fish as pets;
   - 22 families have pet cats and dogs but not fish;
   - 7 families keep fish and also have pet cats but not dogs;
   - 12 families keep fish and also have pet dogs but not cats;
   - 10 families keep cats, dogs, and fish as pets; and
   - 6 families do not keep any pets.



a) How many families ha _____

b) Write down the numb _____

c) How many families in _____

d) Find the number of fa _____

e) Write down the number of families that keep fish as pets in their homes. _____

f) Find the number of families in the Westpoint neighborhood that keep at least one of the three types of pets in their homes. _____

g) How many families keep both, fish and pet cats in their homes? _____

h) How many families keep at least two types of pets in their homes? _____

Name : _____ **Answer key** Score : _____

Draw: S3

## Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) A survey was conducted in Westpoint to find the number of pet owners in the neighborhood.
As per the survey -
- 31 families have only dogs as pets;
- 34 families have only cats as pets;
- 15 families keep only fish as pets;
- 22 families have pet cats and dogs but not fish;
- 7 families keep fish and also have pet cats but not dogs;
- 12 families keep fish and also have pet dogs but not cats;
- 10 families keep cats, dogs, and fish as pets; and
- 6 families do not keep any pets.



a) How many families ha _____ **116 families**

b) Write down the numb _____ **75 families**

c) How many families in _____ **21 families**

d) Find the number of fa _____ **73 families**

e) Write down the number of families that keep fish as pets in their homes. _____ **44 families**

f) Find the number of families in the Westpoint neighborhood that keep at least one of the three types of pets in their homes. _____ **131 families**

g) How many families keep both, fish and pet cats in their homes? _____ **17 families**

h) How many families keep at least two types of pets in their homes? _____ **51 families**

Name : _____ Score : _____

# Drawing Venn Diagram - With Universal Set

Draw: S4

Draw Venn diagram based on the data provided and answer the questions that follow.

1) Students of Grade 3 attended a school carnival-
   - 25 students indulged in funnel cakes;
   - 26 students munched on popcorn;
   - 22 of them drank lemonade;
   - 9 students ate both funnel cake and popcorn but did not drink lemonade;
   - 4 of them munched on popcorn and also drank lemonade but did not eat funnel cake;
   - 7 students had funnel cakes and drank lemonade but did not eat popcorn;
   - 6 students indulged in funnel cakes, popcorn, and lemonade; and
   - 2 students could not eat the carnival.



a) Find the number of st
carnival. _____

b) How many students i _____

c) Write down the numb
cake and popcorn. _____

d) How many students r
lemonade? _____

e) Find the number of students who munched only on popcorn at the carnival. _____

f) How many students of Grade 3 did not drink lemonade? _____

g) Find the number of students who consumed at least 2 of the 3 items. _____

h) How many students of Grade 3 either consumed funnel cake or drank lemonade ? _____

Name : _____ **Answer key** Score : _____

## Drawing Venn Diagram - With Universal Set

Draw: S4

Draw Venn diagram based on the data provided and answer the questions that follow.

1) Students of Grade 3 attended a school carnival-
   - 25 students indulged in funnel cakes;
   - 26 students munched on popcorn;
   - 22 of them drank lemonade;
   - 9 students ate both funnel cake and popcorn but did not drink lemonade;
   - 4 of them munched on popcorn and also drank lemonade but did not eat funnel cake;
   - 7 students had funnel cakes and drank lemonade but did not eat popcorn;
   - 6 students indulged in funnel cakes, popcorn, and lemonade; and
   - 2 students could not eat the carnival.



a) Find the number of st carnival. **5 students**

b) How many students i **43 students**

c) Write down the numb cake and popcorn. **15 students**

d) How many students r lemonade? **5 students**

e) Find the number of students who munched only on popcorn at the carnival. **7 students**

f) How many students of Grade 3 did not drink lemonade? **21 students**

g) Find the number of students who consumed at least 2 of the 3 items. **26 students**

h) How many students of Grade 3 either consumed funnel cake or drank lemonade ? **34 students**

Name : _____ Score : _____

Draw: S5

# Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) A car dealership received customer complaints with regard to the 2017 model of a particular luxury car brand. The complaints included defective frontal air bags, seat belt defects and faulty side marker lights.
   - 43 complaints received were with regard to defective frontal air bags;
   - 27 complaints registered were in connection with seat belt defects;
   - 26 complaints made were in connection with faulty side marker lights;
   - 10 complaints were registered for both defective air bags and seat belts but not for side marker lights;
   - 2 customers complained of seat belt defects and faulty side marker lights but not for air bags;
   - 7 complaints included both defective air bags and faulty side marker lights but not for seat belts;
   - 3 customers registered complaints for all three problems; and
   - 4 customers registered complaints with regard to premature brake failure.



a) How many customers
frontal air bags? _____

b) Find the number of c
at least two of the thr _____

c) How many complaint
side marker lights? _____

d) Write down the numb
frontal air bags or defective seat belts. _____

e) How many customers registered complaints about only defective seat belts? _____

f) Find the number of complaints made with regard to either defective frontal air bags or faulty side marker lights. _____

g) How many customers made complaints for neither defective frontal air bags nor defective seat belts? _____

h) Find the number of complaints that were made for neither faulty side marker lights nor for defective seat belts. _____

Name : _____ **Answer key** Score : _____

Draw: S5

## Drawing Venn Diagram - With Universal Set

Draw Venn diagram based on the data provided and answer the questions that follow.

1) A car dealership received customer complaints with regard to the 2017 model of a particular luxury car brand. The complaints included defective frontal air bags, seat belt defects and faulty side marker lights.
   - 43 complaints received were with regard to defective frontal air bags;
   - 27 complaints registered were in connection with seat belt defects;
   - 26 complaints made were in connection with faulty side marker lights;
   - 10 complaints were registered for both defective air bags and seat belts but not for side marker lights;
   - 2 customers complained of seat belt defects and faulty side marker lights but not for air bags;
   - 7 complaints included both defective air bags and faulty side marker lights but not for seat belts;
   - 3 customers registered complaints for all three problems; and
   - 4 customers registered complaints with regard to premature brake failure.



a) How many customers
frontal air bags? **23 customers**

b) Find the number of c
at least two of the thr **22 complaints**

c) How many complaint
side marker lights? **14 complaints**

d) Write down the numb
frontal air bags or defective seat belts. **57 complaints**

e) How many customers registered complaints about only defective seat belts? **12 customers**

f) Find the number of complaints made with regard to either defective frontal air bags or faulty side marker lights. **59 complaints**

g) How many customers made complaints for neither defective frontal air bags nor defective seat belts? **18 customers**

h) Find the number of complaints that were made for neither faulty side marker lights nor for defective seat belts. **27 complaints**

Name : _____ Score : _____

# Drawing Venn Diagram - With Universal Set

Draw: S6

Draw Venn diagram based on the data provided and answer the questions that follow.

1) A credit card call center in Minneapolis received 3 types of calls on Friday-
   - 95 enquiries were made to check credit card balances;
   - 65 callers made requests for add-on cards;
   - 70 calls were recieved to update changes in communication addresses;
   - 25 customers made enquiries on credit balance and placed requests for add-on cards but not for change of address;
   - 17 calls were made to update changes in address and place requests for add-on cards but not for balance enquiry;
   - 15 calls recieved by the call center to check credit card balance and update change of address but not for add-on cards; and
   - 11 callers made enquiries to apply for a new credit card.



a) How many calls were
the balance on their c _____

b) Find the number of ca _____

c) How many customers
credit card balances c _____

d) Find the number of ca
change of address. _____

e) Based on the data provided, how many customers requested for at least 2 of the 3 services? _____

f) How many calls were by customers to either update change of address or request for add-on cards? _____

g) Find the number of calls made by customers to either enquire about their credit card balances or update changes in address. _____

h) How many customers neither made enquiries on credit card balances nor made requests to update change in address? _____

Name : _____ **Answer key** Score : _____

## Drawing Venn Diagram - With Universal Set

Draw: S6

Draw Venn diagram based on the data provided and answer the questions that follow.

1) A credit card call center in Minneapolis received 3 types of calls on Friday-
   - 95 enquiries were made to check credit card balances;
   - 65 callers made requests for add-on cards;
   - 70 calls were recieved to update changes in communication addresses;
   - 25 customers made enquiries on credit balance and placed requests for add-on cards but not for change of address;
   - 17 calls were made to update changes in address and place requests for add-on cards but not for balance enquiry;
   - 15 calls recieved by the call center to check credit card balance and update change of address but not for add-on cards; and
   - 11 callers made enquiries to apply for a new credit card.



a) How many calls were the balance on their c _____ **55 calls**

b) Find the number of ca _____ **184 calls**

c) How many customers credit card balances c _____ **135 customers**

d) Find the number of ca change of address. _____ **38 calls**

e) Based on the data provided, how many customers requested for at least 2 of the 3 services? _____ **57 customers**

f) How many calls were by customers to either update change of address or request for add-on cards? _____ **118 calls**

g) Find the number of calls made by customers to either enquire about their credit card balances or update changes in address. _____ **150 calls**

h) How many customers neither made enquiries on credit card balances nor made requests to update change in address? _____ **34 customers**