Q1 Declare a variable of type byte and assign a value 45 to it. Declare another variable of type short and assign a value 12345 to it.

Now add these two variables and print sum.

public class Q1 {  
 public static void main(String[] args){  
 byte num1 = 45;  
 short num2 = 12345;  
   
 System.*out*.println("sum = " + (num1 + num2));  
 }  
  
}

Q2 Now what happen if you try to store the above sum in a byte variable? Is there any error? if yes, then explain why this error and fix this error.

Yes, byte can store values from -128 to +128. Addition will happen in integer space and convert to byte cause error: incompatible types.

public class Q1 {  
 public static void main(String[] args){  
 byte num1 = 45;  
 short num2 = 12345;  
 int sum = num1 + num2;  
  
 System.*out*.println("sum = " + sum );  
 }  
  
}

Q3. Declare a variable of type int and assign a value 4567L and explain why are you getting this error?

Number given is long and conversion to int which mean downgrade cause conversion error.

Q4. Declare a variable of type int and assign 100 to it. Declare another variable of type long and assign a value 200 to it. Now add these two numbers and print sum.

public class Q1 {  
 public static void main(String[] args){  
 int num3 = 100;  
 long num4 = 200L;  
  
 System.*out*.println("sum = " + (num3 + num4) );  
 }  
  
}

Q5 What happens if you try to store the above sum in int variable. Is there any error? If yes then explain why this error and fix the error.

It causes incompatible type error because we need to downgrade long to int.

public class Q1 {  
 public static void main(String[] args){  
 int num3 = 100;  
 long num4 = 200L;  
 long sum = num3 + num4;  
 System.*out*.println("sum = " + sum );  
 }  
}