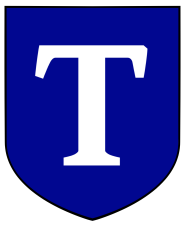


Integers

Grade 7 Mathematics

18 February 2026

Exercise 1

Before solving mathematical problems, it is important that we understand any **key terms** which we may encounter.

a. What is a **whole number?**

_____

b. What is a **fraction?**

_____

c. What is an **integer?**

_____

d. What does it mean to perform **addition** or to **add** two integers?

_____

e. What does it mean to perform **subtraction** or to **subtract** two integers?

_____

f. What does it mean to perform **multiplication** or to **multiply** two integers?

_____

g. What does it mean to perform **division** or to **divide** two integers?

_____

h. What do we mean when we say that one integer is **greater than** another integer?

_____

i. What do we mean when we say that one integer is **less than** another integer?

_____

j. What is a **number line**?

_____

k. What do we mean when we say that an integer is **positive**?

_____

l. What do we mean when we say that an integer is **negative**?

_____

m. What do we mean when we say that one integer is the **opposite** of another integer?

_____

Exercise 2

Please observe the following numbers, and state and explain whether and why you would classify each as a **whole number** and/or **fraction** and/or **integer**.

a. 3 _____

b. $\frac{96}{213}$ _____

c. -9 _____

d. $-\frac{2}{4}$ _____

Exercise 3

Please use a number line to evaluate the following problems:

a. $3 - 12$
   Number line <----------|---------->
   Answer _____

b. $-6 + 15$
   Number line <----------|---------->
   Answer _____

c. 3×-4
   Number line <----------|---------->
   Answer _____

d. -5×-5
   Number line <----------|---------->
   Answer _____

Exercise 4

Please tick and explain whether and why the following equations will result in a **positive** or a **negative** solution:

a. $-41{,}010 \div 652$
   The answer will be
   [ ] positive
   [ ] negative
   because _____

b. $-3{,}430 \times -6{,}777$
   The answer will be
   [ ] positive
   [ ] negative
   because _____

Exercise 5

a. What must I **divide** 96 by to get -8?

b. What must I **multiply** 12 by to get 36?

c. What must I **divide** 108 by to get 12?

Exercise 5

Please insert a greater than $>$ or less than $<$ symbol to make the following expressions true:

a. $52\ [\quad]\ 57$

b. $-40\ [\quad]\ 32$

c. $-120\ [\quad]\ -126$

d. $4{,}502\ [\quad]\ -710$

Exercise 6

Arjun is in Year 7. He owns 5 soccer balls. He wins $68 dollars at a Karate competition. He has $88 dollars in his bank account. He has borrowed 7 books from the library.

What will be the result if:

a. Arjun loses two of his soccer balls because he kicks them over the fence, so he buys 4 more.

_____

_____

b. Arjun deposits the $68 dollars from his karate tournament into his bank account, and he later purchases a T-shirt for $13.

_____

_____

c. Arjun returns 4 of his books to the library, and he borrows 10 more.

_____

_____

Exercise 7

Please evaluate the following equations:

a. $-4 + -3 - -7 + 2$

b. $-15 \div 3 + -12$

c. 3^2

d. $(-3)^2$

e. $(-2)^2 + 3$

f. $(-3)^2 + 2 - 7$

g. $(-4)^2 + 3 - 4 - -2$

h. $(-5)^2 + 2 - 9 - -2 + -6$

i. $(-6)^2 + 1 - 11 - -4 + -2 + (-4)^2$

Exercise 8

Please evaluate the following equations:

a. 6×-1

b. $-12 \div 4$

c. $-3 \times (2)^2$

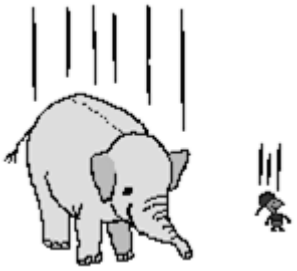
d. $-15 \div -3$

e. $-4 \times (-3)^2$

f. $14 \div -7 + 4$

Exercise 9

a. An elephant and a human person both fall from the sky:



The **elephant** is falling at a rate of **100 meters per second**. The **human person** is falling at a rate of **70 meters per second**.

i) In 4 seconds, how many meters would the elephant fall?

ii) In 3 seconds, how many meters would the human person fall?

Question continues on the next page.

iii) If both the elephant **and** the human person spend 5 seconds falling, which of the two would travel more meters, and why?
To explain why, please show your calculations.

Exercise continues on next page.

b. Arjun has won another Karate competition. This time, he wins $450, which he puts into his bank account.

i) Recalling your answer from **Exercise 6 b,** how much does Arjun now have in his bank account?

ii) Jane, Arjun's friend, wants to buy a bike for $300, but she only has $20. However, Jane knows that her friend Arjun recently won $450 at a Karate competition, so she asks Arjun if she can borrow the remaining amount that she needs to buy the bike, if she pays him back later. Arjun agrees.

1. How much money does Jane want to borrow from Arjun?

Question continues on next page.

2. Jane says that she will pay Arjun back $70 every week until she has paid the full amount that she borrowed.
   After 3 weeks have passed, how much does Jane still owe Arjun?