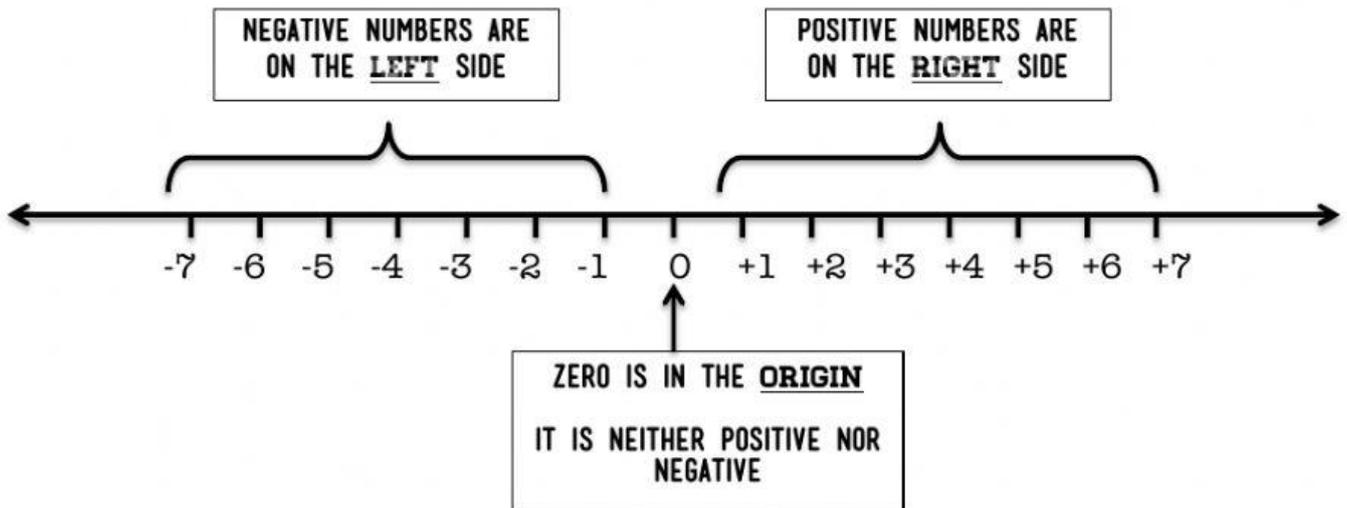At the end of this lesson, you should be able to:
- ☐ Arrange integers on the number line
- ☐ Compare integers using the > and < symbols
- ☐ Apply integers in real life situations

POSITIVE AND NEGATIVE INTEGERS

The set of integers consists of **positive numbers (+1, +2, +3, etc.)** , the number **zero (0)** and **negative numbers (-1, -2, -3, etc.)**.

| NEGATIVE NUMBERS ARE ON THE __LEFT__ SIDE | | POSITIVE NUMBERS ARE ON THE __RIGHT__ SIDE |

-7 -6 -5 -4 -3 -2 -1   0 +1 +2 +3 +4 +5 +6 +7

ZERO IS IN THE __ORIGIN__

IT IS NEITHER POSITIVE NOR NEGATIVE

HEY! MY NUMBER HAS MORE DIGITS THAN YOURS. SO I SHOULD BE LARGER.

-14

5

BUT MY NUMBER IS TO THE RIGHT OF YOURS ON THE NUMBER LINE. SO ITS VALUE IS GREATER.

__FACT:__ THE VALUE OF AN INTEGER INCREASES TOWARDS THE RIGHT ON THE NUMBER LINE
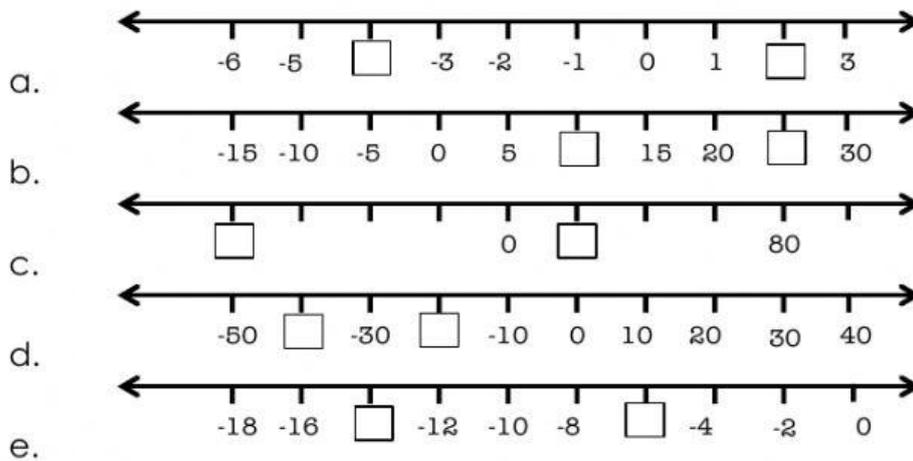
Example: Fill in the box with the sign '>' or '<'.

3 ☐ - 5

-5 -4 -3 -2 -1   0 +1 +2 +3

POSITIVE AND NEGATIVE INTEGERS
EXERCISE

1. Find the missing numbers:

a.

| -6 | -5 | ☐ | -3 | -2 | -1 | 0 | 1 | ☐ | 3 |

b.

| -15 | -10 | -5 | 0 | 5 | ☐ | 15 | 20 | ☐ | 30 |

c.

| ☐ | | | | 0 | ☐ | | | 80 |

d.

| -50 | ☐ | -30 | ☐ | -10 | 0 | 10 | 20 | 30 | 40 |

e.

| -18 | -16 | ☐ | -12 | -10 | -8 | ☐ | -4 | -2 | 0 |

2. Use the symbol '>' or '<' to compare the integers below:

a.   5 ☐ - 5
b.   − 7 ☐ 13
c.   14 ☐ - 20

d.   − 30 ☐ - 45
e.   − 7 ☐ - 70

3. Arrange the integers below in ascending order:

    2,   -7,   5,   -1,   0

    _____

4. The diagram below shows the position of various things above or below sea level. 0 marks the surface of the sea.
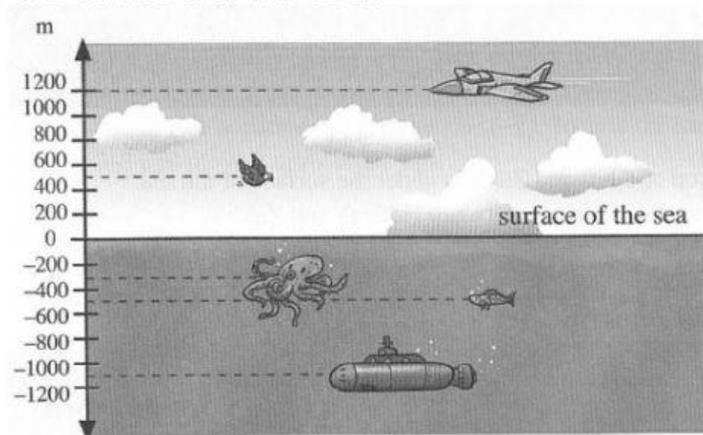
   a) What is the distance of the bird from the surface of the sea?

   b) What is the distance of the submarine from the surface of the sea?

   c) What is the distance between the fish and the bird?