

Warm-Up From Grade 5

Sept.

Write the following numbers in standard form.

A) eight hundred thirty-four

8 3 4

B) three thousand six hundred four

C) ~~forty-eight~~ ³~~thousand~~ ⁶~~,~~ ⁰~~fifty~~ ⁴~~-nine~~

~~D) one hundred two thousand, thirty~~

48 0 5 9

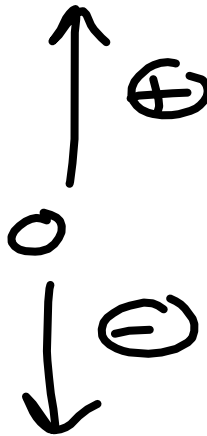
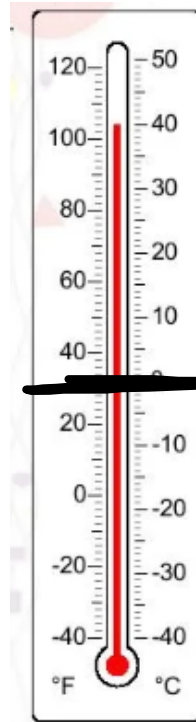


What is this?

A thermometer

What is it used for?

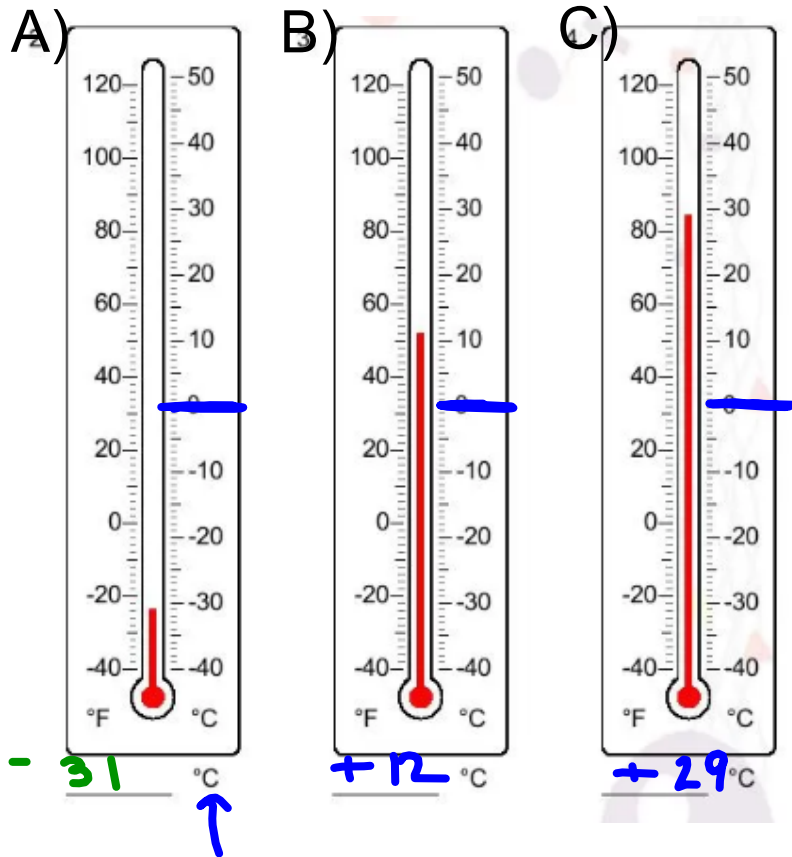
**Measure the air
temperature!**



hot

cold

1) For each below identify the temperature in degrees Celsius.



2) What is the highest temperature? + 29

3) What is the lowest temperature? - 31



7 under par

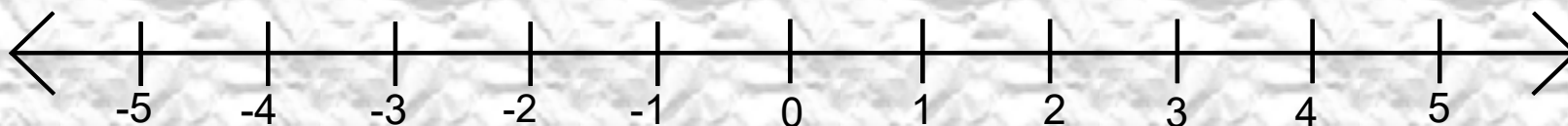


-5°C

Introduction to Integers

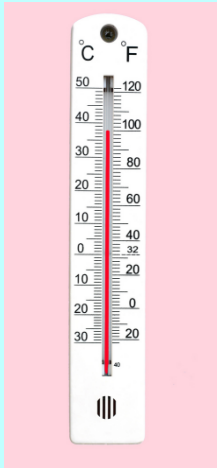


+\$5000



What is an integer?

Chapter 1 Lesson 8 (of Math Makes Sense 6)



Think about temperature...

Temperature is measured in degree celsius ($^{\circ}\text{C}$)

Water freezes at 0°C



A summer's day may have a temperature of 25°C above 0°C .



A winter's day may be 30°C below 0°C .

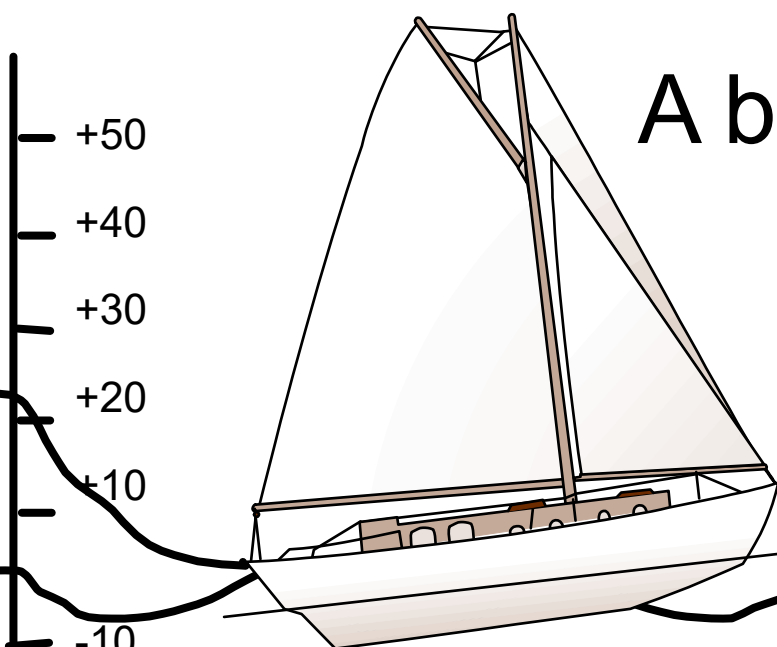


A temperature greater than 0°C is positive

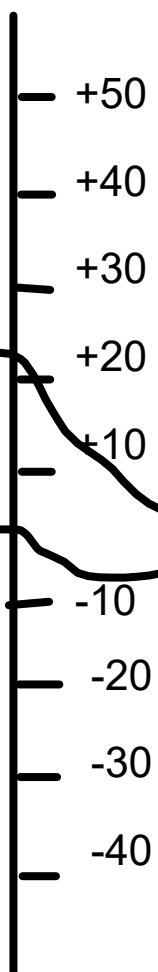
We write 25°C and say twenty-five degree Celsius

A temperature less than 0°C is negative

We write -30°C and say minus thirty degrees Celsius



A boat



A diver

NRC-CMRC

National Research Council
Canada

Canada

Winter Time Zones

- last Sunday in October to
first Sunday in April.

legislated time zone boundary

observed time zone

Coordinated
Universal Time
(modern Greenwich
reference time)

UTC



NST

Newfoundland
Standard Time
(UTC - 3h30)



EST



Eastern
Standard Time
(UTC - 5h)

AST



Atlantic
Standard Time
(UTC - 4h)

CST



Central
Standard Time
(UTC - 6h)

MST



Mountain
Standard
Time
(UTC - 7h)

PST



Pacific
Standard Time
(UTC - 8h)



SOME Key words

Negatives (-)

Lost/lose

withdraw

reduce

go down

below

back

spend

Positives (+)

Gain

deposit

increase

goes up

above

forward

get paid

copy

Use (+) or (-) to represent the situation

a) 10 degrees below zero -10°C

b) parking level is 4 levels below ground -4

c) 15 meters above sea level $+15\text{ m}$

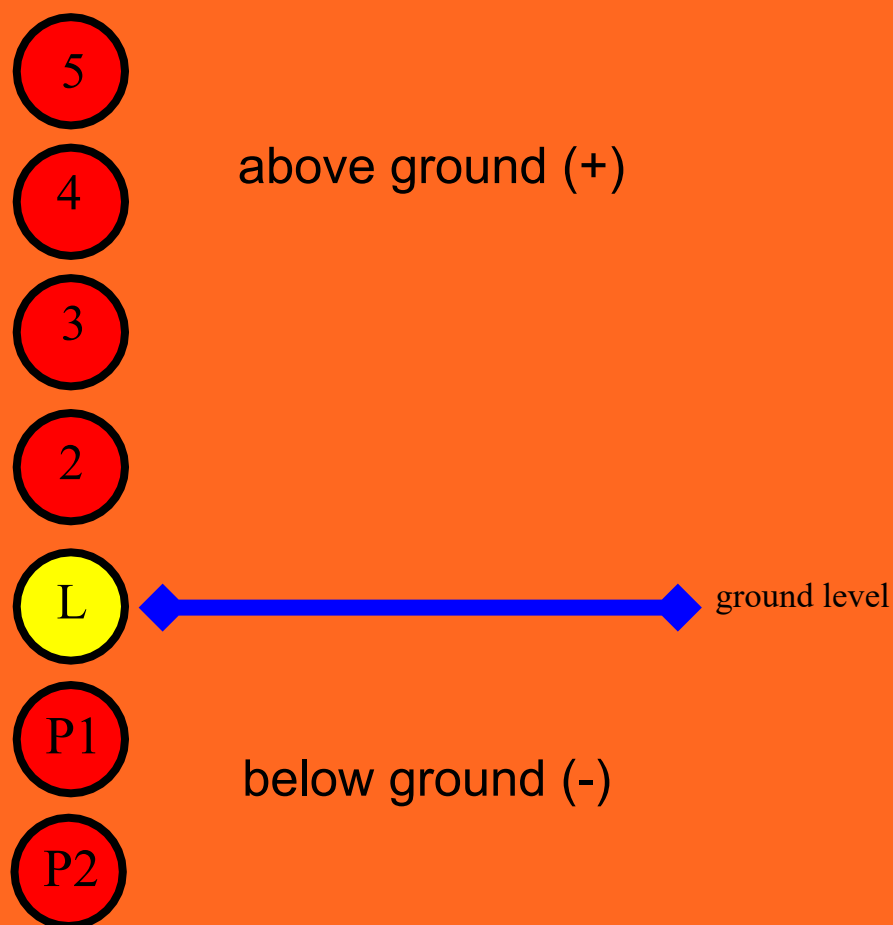


Now write a situation for the number -30

Ivan Spent \$30

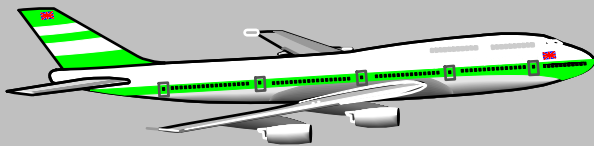
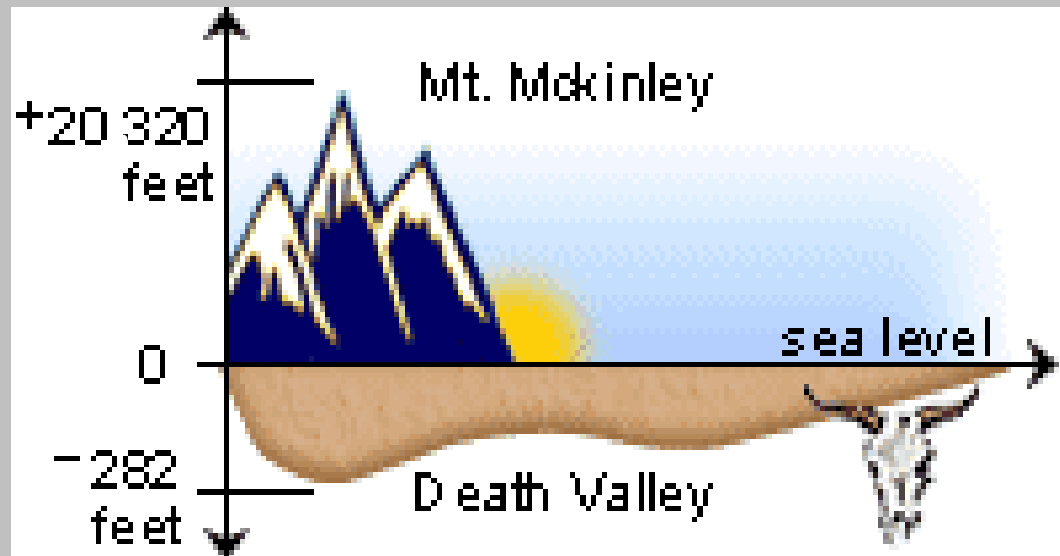
Ways to think about integers in real life:

Floors in a building



Ways to think about integers in real life:

Altitude



airplane above sea level (+)



submarine below sea level (-)

Ways to think about integers in real life:



banking

depositing money (+)



paying money (-)

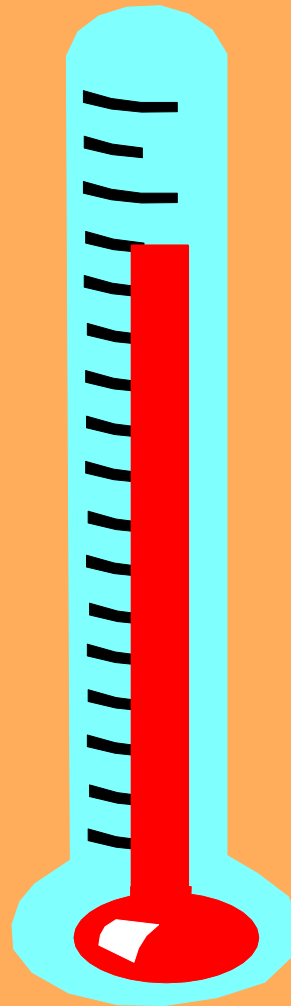
Ways to think about integers in real life:

Thermometer

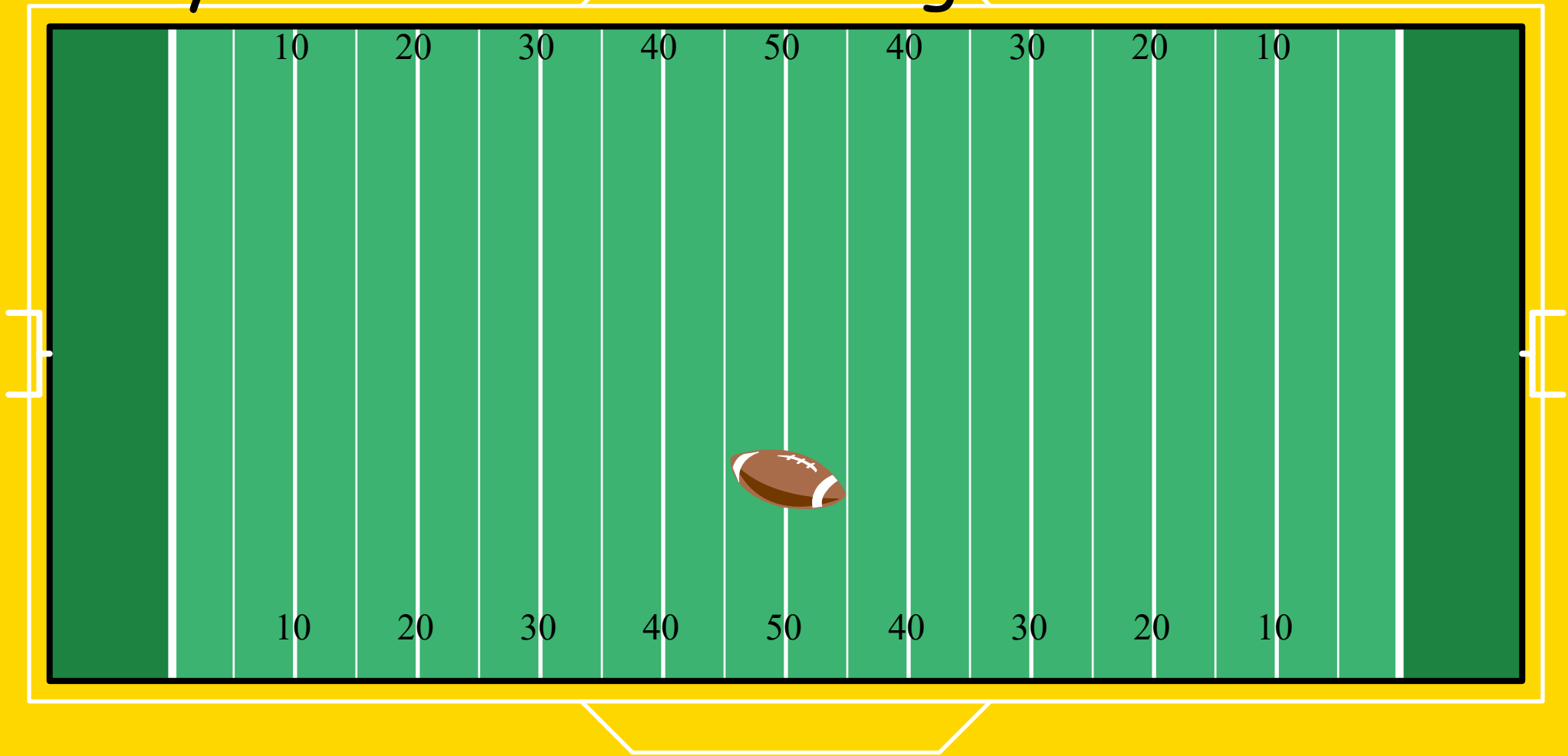
warmer temperature (+)

zero 0°C

colder temperature (-)



Ways to think about integers in real life:



Football

Gaining yards (+) Losing yards (-)

Remember

copy

Whole numbers are the numbers you count with 0,1,2,3,4,....

Integers are positive or negative whole numbers

...-3, -2, -1, 0, +1, +2, +3 ...

ZERO has no sign (used for comparing)

In this unit you MUST include the signs

Text book will use tiles to represent integers when we draw

 yellow is +1

 red is -1

 shaded +

 unshaded -

Let's Try

Model -3



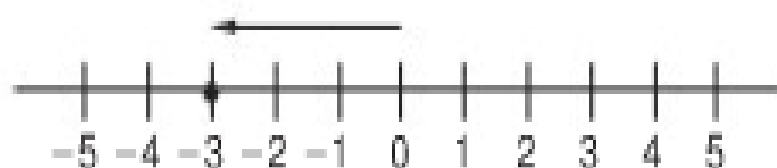
Model +5



- We can show integers on a horizontal or vertical number line.

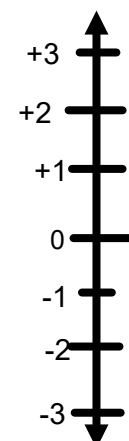
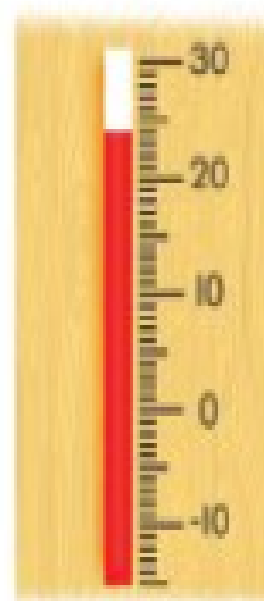
You have used horizontal number lines with whole numbers.

We extend the number line to the left of 0 to show *negative integers*.

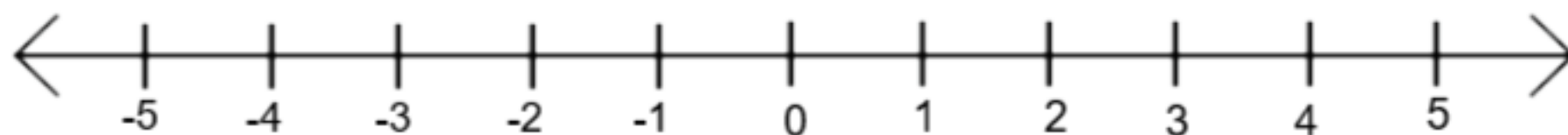


The arrow on the number line represents -3 .
 -3 is a negative integer. We say, "Negative 3."

A thermometer is a vertical number line.



Integers can be displayed on a vertical or horizontal number line.
Horizontal Number line



- Circle the key word that indicates the sign then write the correct integer in the box

a loss of \$10.00 =

2 metres below sea level =

4 units to the right =

10 steps forward =

spending \$4.00 =

2 levels above ground =

Class/Homework

if Needed

Circle the key word that indicates the sign then write the correct integer.

Integer Scenario Questions

- 1) Sarah deposited \$20 into her bank account. What integer represents this? _____
- 2) The temperature in Winnipeg dropped 12 degrees below zero. What integer represents this temperature change? _____
- 3) A submarine is 250 meters below sea level. What integer represents its elevation? _____
- 4) Liam borrowed \$15 from his friend. What integer represents the money he owes? _____
- 5) A football player gained 8 yards on a play. What integer represents this gain? _____
- 6) Emma withdrew \$30 from her bank account. What integer represents this transaction? _____
- 7) The temperature rose 7 degrees above zero. What integer represents this change?

- 8) In a video game, Alex lost 50 points after making a mistake. What integer represents this score change? _____
- 9) A hiker is standing 400 meters above sea level. What integer represents this elevation?

- 10) A company had a profit of \$120 last week. What integer represents this profit?
