



- 1) $10 + 92$ 102
- 2) $24 - 10$ 14
- 3) $\frac{1}{2}$ of 30 15
- 4) $3000 \div 100$ 30
- 5) $15 \div 5$ 3
- 6) 16×10 160
- 7) 14×2 28
- 8) 3×25 75
- 9) What number is divisible by 6? a) 110 b) 112 c) 102
- 10) $175 \div 25$ 7

$$1 \times 0 = 1 + 1 + 0$$

$$112 = 1 + 1 + 2 = 4$$

$$102 = 1 + 0 + 2 = 3$$

Magic Square:

1) Remember to pick 3 squares in a row - add up the integers to see what the magic sum is for this square...

-6	-7	+1
+3	-4	-11
-9	-1	-2

-12

- To add a positive integer, move right (in the positive direction).

$$(-2) + (+3)$$

Start at 0.

Draw an arrow 2 units long, pointing left.

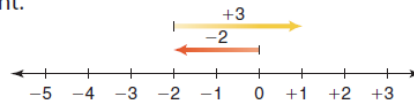
This arrow represents -2 .

From -2 , draw an arrow 3 units long, pointing right.

This arrow represents $+3$.

The arrow head is at $+1$.

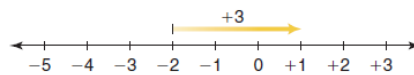
$$\text{So, } (-2) + (+3) = +1$$



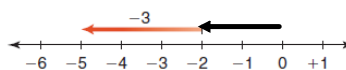
Notice that the first arrow ends at the first integer.

So, we could start at that integer,

and use only 1 arrow to find the sum.

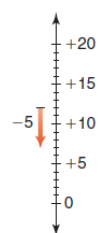


- To add a negative integer, move left
(in the negative direction).
 $(-2) + (-3)$
Start at -2 .
Draw an arrow 3 units long, pointing left.
This arrow represents -3 .
The arrow head is at -5 .
So, $(-2) + (-3) = -5$



We can use the same method to add integers
on a vertical number line.

- The temperature is 12°C . It falls 5°C .
Find the final temperature.
 $(+12) + (-5)$
Start at $+12$.
Draw an arrow 5 units long, pointing down.
This arrow represents -5 .
The arrow head is at $+7$.
So, $(+12) + (-5) = +7$
The final temperature is 7°C .



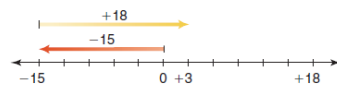
Example

Sandra and Joe buy and sell CDs at a flea market.
One day in August, they bought 3 CDs for \$5 each.
They sold 2 CDs for \$9 each.

- Write the expenses and income as integers.
- Did Sandra and Joe make money or lose money that day in August?
Explain.

A Solution

- Expenses: $(-5) + (-5) + (-5) = -15$; they spent \$15.
Income: $(+9) + (+9) = +18$; they made \$18.
- Draw a number line.
Add expenses and income.



$$(-15) + (+18) = +3$$

Since the sum of the expenses and income is positive,
Sandra and Joe made money. They made \$3.

Another Strategy

We could use coloured tiles.

Practice

1. Use a number line to represent each sum.

a) $(+1) + (+3)$

b) $(-1) + (+3)$

c) $(-3) + (+1)$

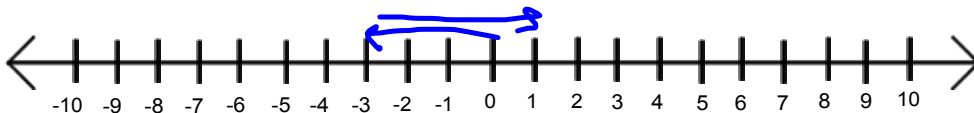
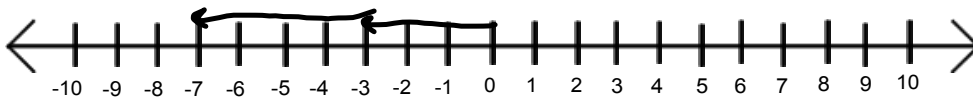
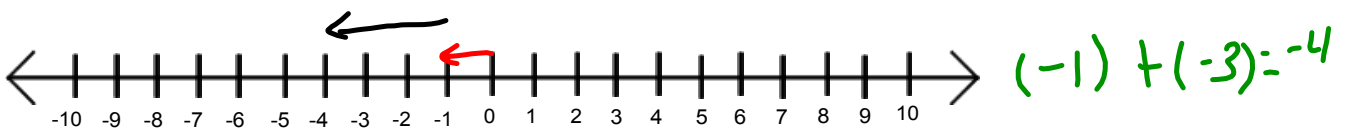
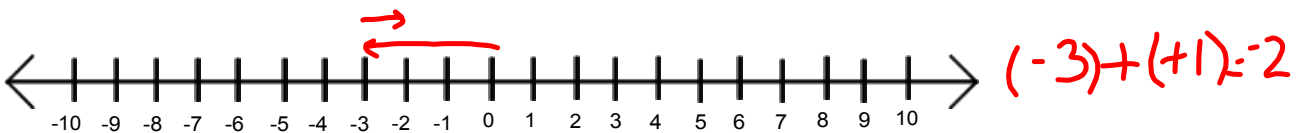
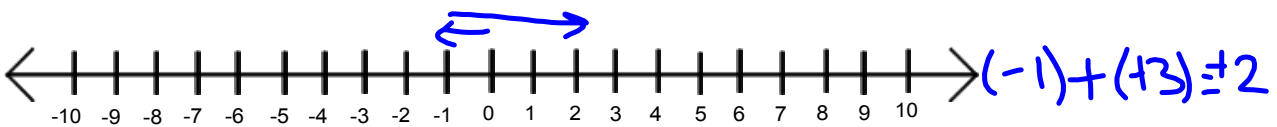
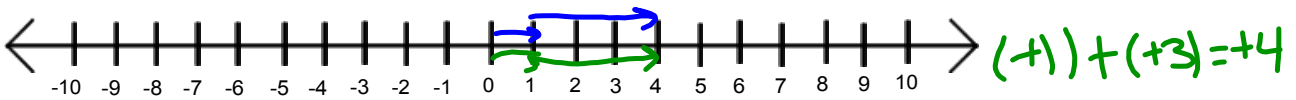
d) $(-1) + (-3)$

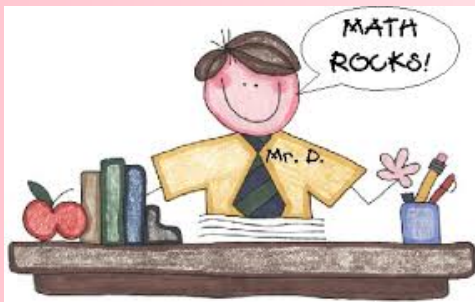
e) $(-3) + (-4)$

f) $(-3) + (+4)$

g) $(+3) + (-4)$

h) $(+3) + (+4)$





p. 62
Q. 2, 3
p. 63
Q. 4, 5, 6

Practise sheet - complete all questions :)

Homework!!!

Make sure you prove your answers with examples!!! :)

9. **Assessment Focus** Is each statement always true, sometimes true, or never true?

Use a number line to support your answers.

- a) The sum of two opposite integers is 0.
- b) The sum of two positive integers is negative.
- c) The sum of two negative integers is negative.
- d) The sum of a negative integer and a positive integer is negative.