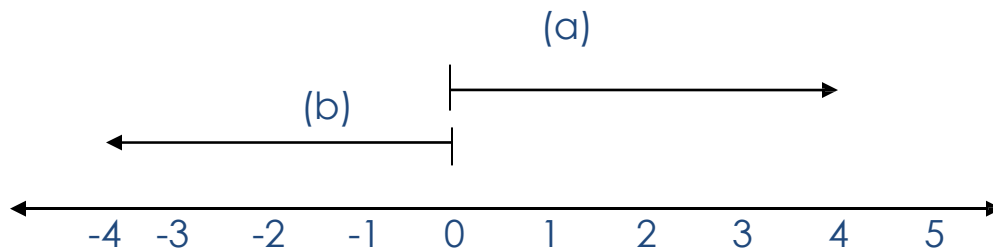


P.5 MATHS LESSON NOTES WEEK 2

LESSON 1

Arrows on number lines

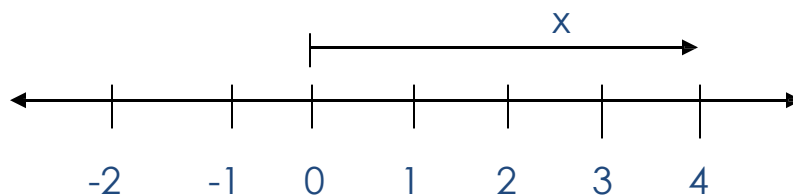


NB

- Any arrow running in the direction of arrow (a) is a positive arrow.
- Any arrow running in the direction of arrow (b) is a negative arrow.

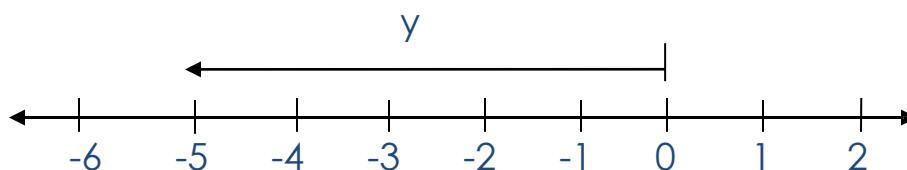
Examples

1. What integers are represented by the arrows on the number lines below.



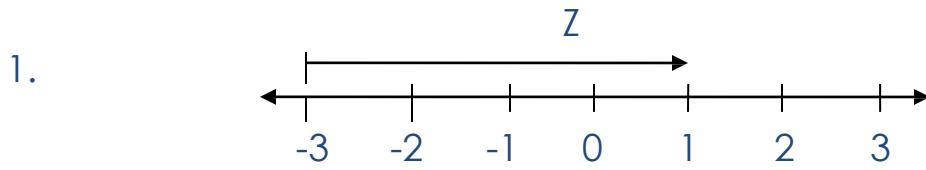
$$x = \underline{\quad +4 \quad}$$

- 2.



$$y = \underline{\quad -5 \quad}$$

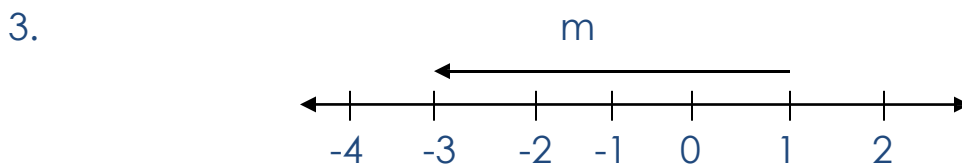
ACTIVITY



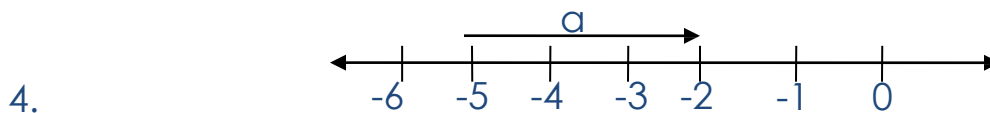
$z =$ _____



$r =$ _____

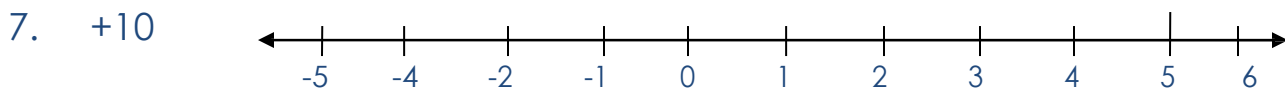


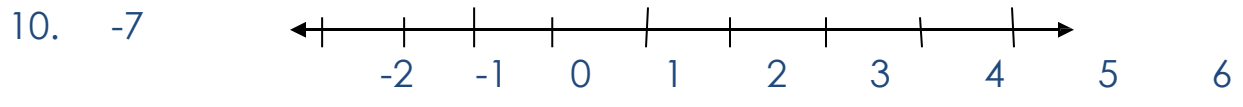
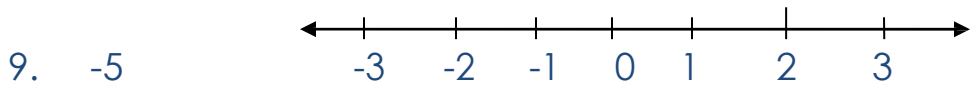
$m =$ _____



$a =$ _____.

Represent the following integers on the number lines below.





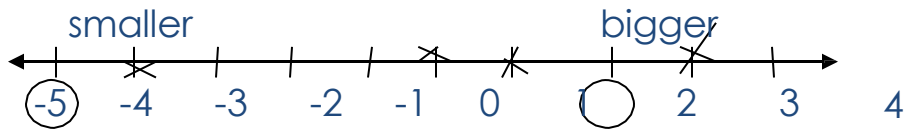
LESSON 2

Ordering integers

Ordering integers using a number line

Examples

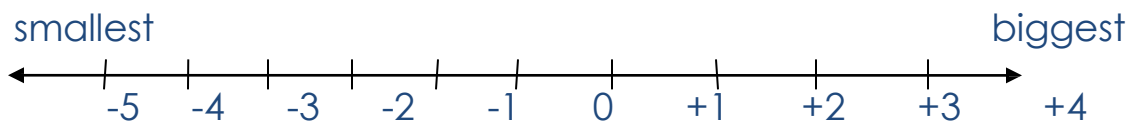
1. Which is smaller -5 or +2



-5 is smaller

.. $-5 \leq 2$

2. Arrange +1, -3, 0, -2, +3, -4 starting with the smallest



-4, -3, 0, +1, +3

Exercise

Arrange the following as instructed in brackets

1. $-1, 2, -3, 4, -5$, (from the smallest)
2. $-2, +2, -3, +3$ (in descending order)
3. $+1, -2, +3, -4, +5$ (from the biggest)
4. $-10, +1, -3, +5$ (from the smallest)
5. $-4, +4, 0, -3, +6$ (in ascending order)
6. Which is bigger -2 or 0 ?
7. Which is smaller -10 , or $+3$?
8. Which is bigger 0 or -4 ?
9. Which is smaller $+7$ or -3 ?
10. Which is bigger $+4$ or 0 ?

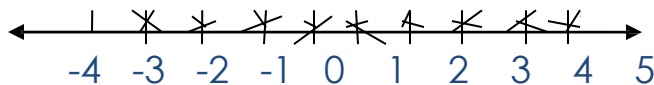
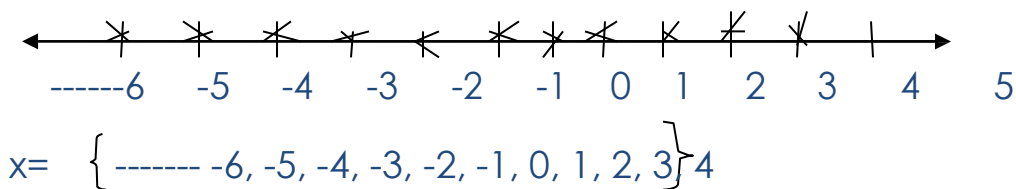
LESSON 3

Ordering integers using symbols

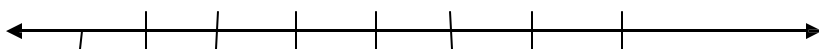
$\geq, \leq, >, <$

Examples

1. $x < 5$ (means x are integers less than 5)



2. $n > -4$ (means n are integers greater than -4)
3. $X \geq 0$ (means x are integers greater than 0 including zero)



$$x = \{-1, 0, 1, 2, 3, 4, 5, 6\}$$

Exercise

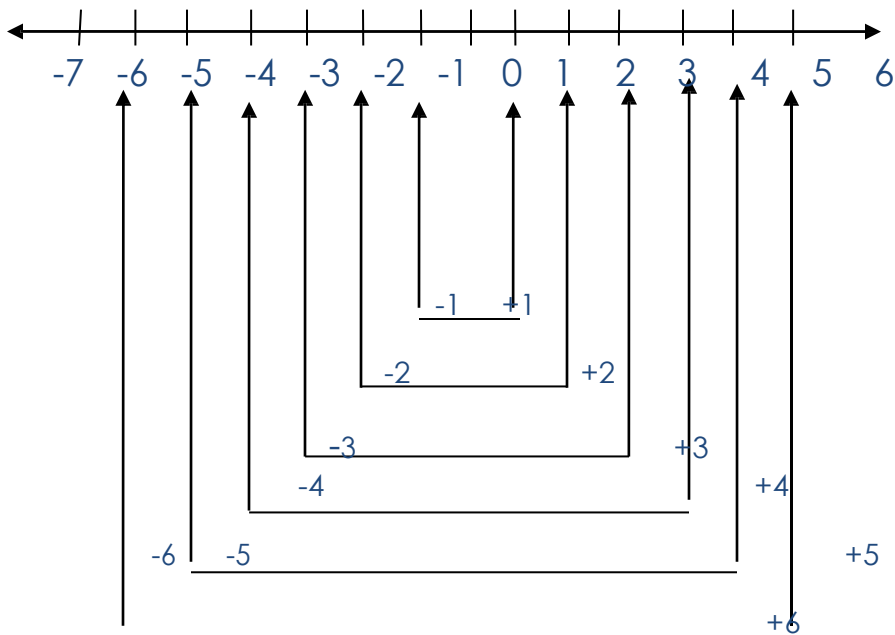
Represent the following on the number line and list members in each.

- | | |
|---------------|-----------------|
| 1. $x > 2$ | 6. $a < 3$ |
| 2. $P < 5$ | 7. $m > -4$ |
| 3. $X < 2$ | 8. $x > 0$ |
| 4. $X \leq 2$ | 9. $a > 3$ |
| 5. $P > 5$ | 10. $p \geq -4$ |

LESSON 4

INVERSES AND ADDITIVE INVERSE

Inverses of integers or opposites of integers



Examples

- The inverse of -1 is +1

2. The inverse of +1 is -1
3. The inverse of -5 is +5
4. The inverse of +3 is -3

Exercise

Name the inverse or opposite of the following integers

- | | |
|--------|----------|
| 1. +5 | 8. -14 |
| 2. -9 | 9. +25 |
| 3. +10 | 10. -56 |
| 4. +5x | 11. +100 |
| 5. -30 | 12. -200 |
| 6. -7 | 13. -500 |
| 7. +31 | 14. +60 |

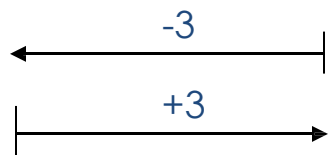
Additive inverse

Additive inverse is a number which gives zero when added to another number.

Inverse property: Any number added to its inverse or opposite gives zero

Examples

1. $+3 + -3$



$+3 + -3 = 0$

$-4 + +4 = 0$

2. $-4 + +4 =$

Exercise

Work out the following without a number line.

1. $-11 + + 11 =$

2. $-56 + +56 =$

3. $_88 + -88 =$

4. $-20 + +20 =$

5. $+21 + -21 =$

6. $-34 + +34 =$

7. $-150 + +150 =$

8. $-6f + +6f =$

9. $-152 + +152 =$

10. $- 40+ + 40 =$

Add the following additive inverses on a number line.

11. $+4 + -4 =$

12. $-7 + +7 =$

13. $+5+ -5 =$

14. $-9 + +9 =$

15. $+8 + -8 =$

LESSON 5

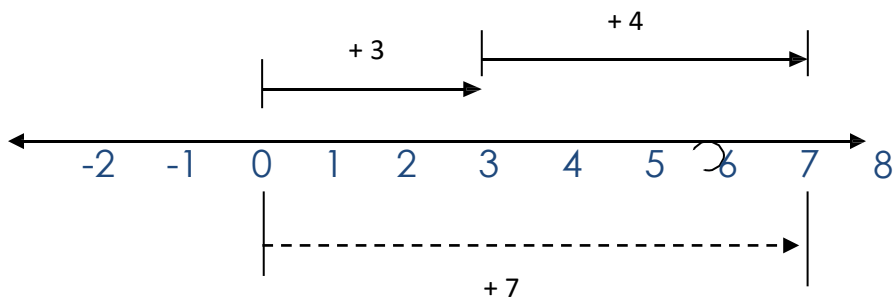
Addition of integers using a number line

Note

1. Your face is your +ve
2. Your back is your -ve
3. Always start facing the direction of the +ve arrow
4. An addition operation means face the direction of the positive arrow.
5. A subtraction operation means face the direction of the -ve arrow
6. For positive integers move using your face (move forward)
7. For negative integers move using your back. (move backwards)

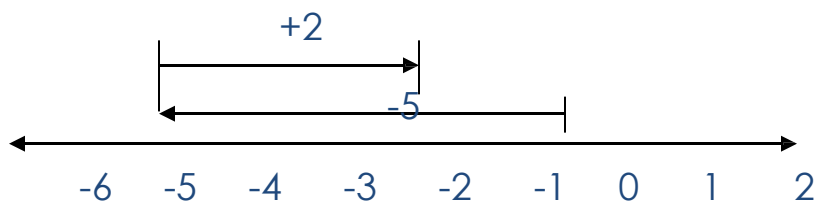
Examples

1. Add $+3 + +4$ using a number line



$$+3 + +4 = +7$$

2. Add $-5 + +2$ using a number line.



$$-5 + +2 = -3$$

3. $-3 + -5$. Add using a number line



$$-3 + -5 = -8$$

Exercise

Add the following using a number line

1. $+3 + +2$
2. $+4 + +3$
3. $-1 + +5$
4. $-6 + +7$
5. $+6 + +3$
6. $-7 + +5$
7. $+9 + -3$
8. $-6 + -5$
9. $-8 + +8$
10. $+9 + -9$

