NAME

INTERGERS&EQUATIONS

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Edition 1

MC MASTER COACHING
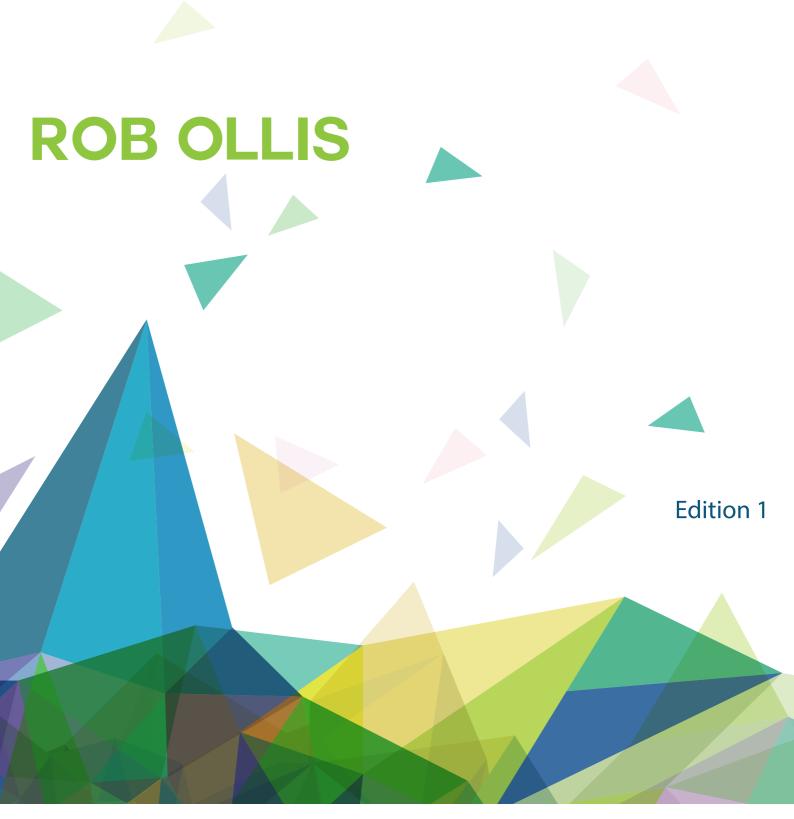
Directed Numbers

The direction of a number is determined by the number of negative signs associated with the number.

If there is an **even** number of negative signs associated with the number then the number is **positive**.

If there is an **odd** number of negative signs associated with the number then the number is **negative**.

For the purpose of direction , numbers joined by x or $\div$ (multiplication or division) operands , are considered as one number.

e.g. $^-12 \times ^- 9 \div ^{-+} 6$ is considered as one directed number with 3 negative signs
and is therefore negative , in this case $^-18$

e.g. $\left(^-2\right)^9$ is considered as one directed number with 9 negative signs , $= ^-512$

Combining Directed Numbers

After the direction of each directed number has been determined,
find the sum of all the positives **P** , and the sum of all the negatives **N**.

The final answer is the difference between **P** and **N**.

If **P** is larger that **N** then the answer is positive.
If **N** is larger than **P** then the answer is negative.

eg **a**
$$\underset{N}{^-6} \underset{N}{\overset{\text{odd}}{\left| -^-3\times^-5\right.}} \underset{P}{\overset{\text{even}}{\left| +^-4\times^-5 \right|}} = 20-21 = ^-1$$

P	N
20	6
	15
20	21

b
$$\underset{P}{\overset{\text{even}}{-^-12}} \underset{P}{\overset{\text{even}}{\left| +^-48\div^-3 \right.}} \underset{N}{\overset{\text{odd}}{\left| -^{+}17 \right|}} = 28-17 = 11$$

P	N
12	17
16	
28	17

c $^-7 \left| -8 \right| = ^-15$

P	N
	7
	8
	15

d $-^-8 \times^- 3 \left| = ^- 24 \right.$

1 **a** 10   **b** −10   **c** −8

    d −5   **e** 23   **f** −45

    g −21   **h** −15   **i** 25

    j −5   **k** −36   **l** 7

    m −13   **n** 20   **o** 11

    p −16   **q** 10   **r** −12

    s 35   **t** 11   **u** −14

    v 18   **w** 39   **x** −17

2 **a** 12   **b** 4   **c** −5

    d 9   **e** 25   **f** −14

EQUATIONS
Answers

Set 1   **a** $x = 8$ **b** $y = 4$ **c** $m = 5$ **d** $a = 7$ **e** $y = 11$

           f $m = 8$ **g** $m = 10$ **h** $k = 11$ **i** $a = 21$ **j** $y = 12$

Set 2   **a** $y = 10$ **b** $a = 5$ **c** $m = 4$ **d** $k = 5$ **e** $y = 8$

           f $p = 12$ **g** $a = 10$ **h** $k = 5$ **i** $m = 2$ **j** $p = 31$

Set 3   **a** $y = 10$ **b** $a = 8$ **c** $y = 5$ **d** $k = 8$ **e** $a = 21$

           f $m = 6$ **g** $k = 27$ **h** $r = 20$ **i** $y = 4$

Set 4   **a** $k = 5$ **b** $a = 9$ **c** $y = 6$ **d** $y = 6$ **e** $m = 14$

           f $a = 9$ **g** $a = 9$ **h** $y = 9$ **i** $m = 8$ **j** $p = 7$

Set 5   **a** $y = 3\frac{1}{3}$ **b** $m = 9$ **c** $a = 7$ **d** $k = 10$ **e** $y = 10$

           f $k = 4$ **g** $y = 4$ **h** $x = -3$ **i** $m = 4$ **j** $m = -5$

Set 6   **a** $y = -3$ **b** $k = -10\frac{1}{2}$ **c** $x = 13\frac{1}{2}$ **d** $a = -5$ **e** $y = 4$

           f $a = -\frac{2}{7}$ **g** $m = 2\frac{1}{5}$ **h** $y = 3$ **i** $k = 3$ **j** $y = 10\frac{1}{6}$

Set 7   **a**   24   **b**   21   **c**   14   **d**   18   **e**   27, 28

           f   36   **g**   22, 24, 26   **h**   36   **i**   4

Set 8   **a** $AP = 5\frac{1}{2}$cm,   **b** $AP = 5\frac{1}{3}$cm   **c** $AQ = 13\frac{1}{3}$cm   **d** $\angle AOC = 30°$

                  $PB = 2\frac{1}{2}$cm

           e $\angle AOC = 30°$ **f** $x = 40°$ **g**   80c   **h**   AB=75m

           i $\angle B = 80°$ **j** $\angle P = 27 \cdot 5°$

Master Coaching Pledge

Master Coaching Keys to Learning:

The following charter has been produced to prepare you the pursuit of excellence that leads to a life-time of rewards and fulfillment. This is a partnership agreement that allows both parties to mutually benefit from your time at Master Coaching

At the coaching session:

1. **Smile, relax, you are focused and in control**
2. **Concentrate, visualize, execute: claim the reward**
3. **Assume success. Our members should approach each test in life enthusiastically; every challenge presents an opportunity to demonstrate your prowess. Relish but don't underestimate the magnitude of the test, instead focus your thoughts towards a positive outcome, a chance to excel; a time to enjoy your moment in the sun.**

Master Coaching Pledge

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- that your welfare is the paramount consideration in everything that we do
- to be diligent in our preparations which directs our actions in support of you
- show care and give encouragement to you in your striving for excellence
- to personalise all our efforts to your specific needs in all areas
- to encourage you to dare to dream, and to expect that dreams do come true

My Commitment to Master Coaching

- to be honest in all my dealings and
- to accept their accolades and focus my efforts on achieving the zenith in all my endeavours
- to appreciate my cohorts and support them in any way possible
- to live the dream, strive for excellence in everything that I do
- visualise my ultimate success

Christian Avent

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Founder, Master Coaching

Your complete satisfaction is the focus of everything we do.