YEAR 8 MATHEMATICS WEEK 4 2020 (TERM 2)

Year: 8 **Date: Monday 8 June 2020**

STRAND: NUMBERS **TOPIC: Directed Numbers**

LESSON OUTCOME: At the end of this lesson student(s) should be able to Subtract directed numbers.

Instructions: Hi dear Parents/Guardians and students - In this Lesson students are going to subtract directed numbers by doing the selected questions for **Exercise 2.6**.

[*Note that all the Quizzes/Test and or Assignment will be based on the selected questions for each exercise. These lessons are designed for* ***one hour per Lesson****.]*

What to do: Do the following selected questions

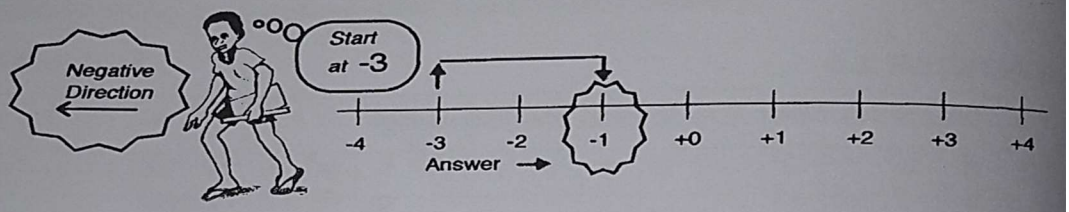
Exercise 2.6: Q1 (e, k, q); Q2 (d, i, m); Q3 (a, f, k)

Solutions: Solutions will be available online via
https://www.facebook.com/centralschoolemergencyforum/posts/108720557434149

Subtracting Directed Numbers
Using the number line for subtraction

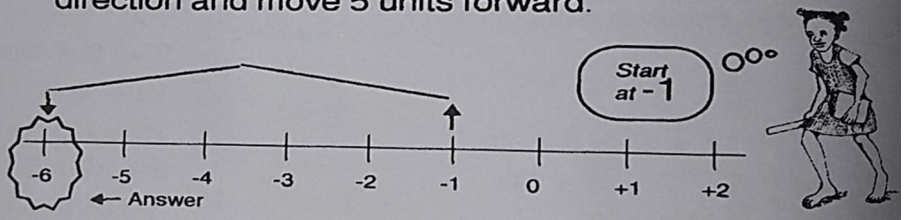
In order for us to subtract positive and negative numbers, we need to use the two rules described or used in addition of negative and positive numbers.

Example 1 (-3) - (-2) means start at (-3), face the negative direction and move backwards 2 units.



Therefore: (-3) - (-2) = -1

Example 2 (-1) - (+5) means start at (-1), face the negative direction and move 5 units forward.



Therefore, (-1) - (+5) = -6

EXERCISE 2.6

1. Find the answers to each subtraction. Draw a number line for each subtraction to help you.

a. (+3) - (+1)
b. (+5) - (-7)
c. (-4) - (-1)
d. (-1) - (+7)
e. (-3) - (+6)
f. (-6) - (-10)
g. (-2) - (+4)
h. (+3) - (-2)
i. (-5) - (+2)
j. (+7) - (-3)
k. (+9) - (-1)
l. (+4) - (-5)
m. (-10) - (+5)
n. (-5) - (-5)
o. (+6) - (+3)
p. (+8) - (-4)
q. (-8) - (+4)
r. (+4) - (-4)

2. Do these subtractions:

a. 8 - (-1)
b. 9 - 4
c. (-4) - 2
d. (-6) - 2
e. 9 - (-3)
f. 12 -(-3)
g. (-7) - (+2)
h. (+12) - (+3)
i. (-3) - (+4)
j. (-2) - (-6)
k. (-1) - (-4)
l (+4) - (-4)
m. 10 - 2
n. (+15) - (+7)
o. (-7) - (-8)

3. Find the answer to each subtraction.

a. (+12) - 3
b. (+13) - (+5)
c. (+6) - (-2)
d. (+10) - (+10)
e. (+3) - (-5)
f. (-2) - (-6)
g. (-7) - (+10)
h. (-7) - (+5)
i. (-3) - (+4)
j. (-6) - (+5)
k. (+12) - (-5)
l. (+9) - (+6)
m. (-6) - (+12)
n. (+4) - (+3)
o. (-6) - (+2)

Further Simplification

Remember that when a number is written without a sign, it is a **positive** number.

So, the numbers +1, +2, +3 etc., can be written as 1, 2, 3, etc.,.

Look at the following working out:

1. $6\,(-\,^{+})\,2 = 4$ same as $6-2 = 4$ $6\,(+\,^{-})\,2 = 4$

2. $-5\,(-\,^{+})\,3 = -8$ same as $-5-3 = -8$ $-5\,(+\,^{-})\,3 = -8$

3. $9\,(-\,^{-})\,3 = 12$ same as $9+3 = 12$ $9\,(+\,^{+})\,3 = 12$

4. $-7\,(-\,^{-})\,2 = -5$ same as $-7+2 = -5$ $-7\,(+\,^{+})\,2 = -5$

What do you notice from the above working out? Look at the two signs between the numbers.