Year: 8
Date: Wednesday 17 June 2020
STRAND: NUMBERS

TOPIC: Directed Numbers

LESSON OUTCOME: At the end of this lesson student(s) should be able to Calculate directed numbers using the order of operation method.

Instructions: Hi dear Parents/Guardians and students - In this Lesson students are going to Calculate directed numbers using the order of operation method by doing the selected questions for Exercise 2.10.
[ 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 2.10: Q1; Q3; Q10; Q15; Q19; Q27; Q36

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

## EXERCISE 2.9

|  | - |  | $-30 \div 15$ | 31. | -65 -5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | $49 \div 7$ | 16. | $30 \div 15$ $30 \div-2$ | $32 .$ | $-5 \times-20$ |
| 2 | $-14 \div-2$ | 17. | $30 \div-2$ |  |  |
| 3. | $24 \div 3$ | 18. | $+100 \div-5$ | 33. | $-8 \times 2 \frac{1}{2}$ |
| 4. | $25 \div 5$ | 19. | $-21 \div-7$ | 34. | +14× $\frac{1}{2}$ |
| 5. | $16 \div 8$ | 20. | $+21 \times 3$ | 35. | $-18 \times-2$ |
| 6. | $-21 \div-7$ | 21. | $-1 \div-10$ | 36. | $49 \div 2$ |
| 7. | $35 \div 7$ | 22. | $+40 \div-4$ | 37. | $7 \times-2 \times-1$ |
| 8. | $24 \div 12$ | 23. | $50 \div-15$ | 38. | $+68 \div-4$ |
| 9. | $48 \div 6$ | 24. | $-25 \div-2$ | 39. | $50 \div-2$ |
| 10. | $30 \div 10$ | 25. | $-2 \times 2 \times 2$ | 40. | $-28 \div-2$ |
| 11. | $64 \div 8$ | 26. | $-33 \div-11$ | 41. | $-63 \div+9$ |
| 12. | $72 \div 8$ | 27. | $-45 \div 9$ | 42 | $-44 \div-4$ |
| 13. | -8 - -2 | 28. | $100 \div 25$ | 43 | -70 -2 |
| 14. | -8x+2 | 29. | -64 $\div-2$ | 44. | $6 \times-2$ |
| 15. | $+24 \times-2$ | 30. | $35 \div 5$ | 45. | $-120 \div 60$ |

## Order of Operations

## Reminder:

Do 1. All brackets first
2. All times $(x)$ and division $(\div)$ from left to right
3. All plus ( + ) and minus $(-)$ from left to right.

Example 1 Simplify $(-2-4) \times 2$

$$
\begin{aligned}
& (-2-4) \text { becomes }-6 \\
& =-6 \times 2 \\
& =\quad-12
\end{aligned}
$$

Example 2

$$
\begin{aligned}
& \text { Simplify }-1 x-7-(24 \\
& =\quad-1 x-7-12 \\
& =\quad 7-12 \\
& =\quad 7+12 \\
& =\quad 19
\end{aligned}
$$



## EXERCISE 2.10

Simplify:

| 1. | $17+(2 x-4)$ | 19. | $24-(+9 \div 3)$ |
| :---: | :---: | :---: | :---: |
| 2. | $3 \times-4+(7 \times 3)$ | 20. | $4 \div(6+2) \times 2$ |
| 3. | $(-70-7)-(-15+10)$ | 21. | $14-(2+3) \times 2$ |
| 4. | $6+4 \times-9$ | 22. | $51-3 \times 3$ |
| 5. | $12-3 \times-6+9$ | 23. | $11+(12-8) \times 2$ |
| 6. | $10-3-9+1$ | 24. | $4 \div 4+7 \times 2$ |
| 7. | $11 \times 6-9$ | 25. | $2 \times(15-5)-5$ |
| 8. | $-7 \times 3-(-40 \div 8)$ | 26. | $9 \div 1-4$ |
| 9. | $-16 \div-2+(-3 \times-2)$ | 27. | $\frac{(11+9)}{(7-2)}$ |
| 10. | $(-64 \div 8)+13 \times 3$ | 28. | $(6 \times 2) \div 3+(-1)$ |
| 11. | $-5+(16 \times-3)-11$ | 29. | $3+3 \times(7-3)$ |
| 12. | $108 \div 2 \times-7$ | 30. | $(-8 \div-2) \times-4$ |
| 13. | $9+(+2 x+2)$ | 31. | $(6+2) \times 3+2$ |
| 14. | 15-8 $\div 1$ | 32. | $-6 \times 2+3$ |
| 15. | $(+12++2) \div 2-5$ | 33. | $(23-3) \div 4+3$ |
| 16. | $6 \times 6-5 \times 5$ | 34. | $(-16 \div 4) \times-2$ |
| 17. | $16-(6+1) \times 2$ | 35. | 15-(6+3) |
| 18. | 16-(8-8) | 36. | $3+2 \times 7-(2 \times 4)$ |

