

NAME _____

QUARTER 1

GRADE & SECTION _____

DATE _____

Activity: Finding Common Difference

Show the solution to find the common difference and complete the given arithmetic sequence.

Recall that: $d = \frac{a_n - a_k}{n - k}$

1) The 4th term of an arithmetic sequence is 52 and the 15th term is 162.

Take $a_n = 162$, $n =$

Solution:

and $a_k =$, $k =$

$$d = \frac{162 - \boxed{}}{\boxed{} - \boxed{}}$$

$$d = \frac{\boxed{}}{\boxed{}}$$

$$d = \boxed{}$$

Therefore, to complete the sequence:

$$\begin{array}{ccccccccc} \boxed{} & \boxed{} & \boxed{} & \boxed{52} & \boxed{} & \boxed{} & \cdots & \boxed{162} & \cdots & \boxed{} \\ a_1 & a_2 & a_3 & a_4 & a_5 & a_6 & & a_{15} & & a_{40} \end{array}$$

2) The 3rd term of an arithmetic sequence is -2 and the 18th term is -77.

Take $a_n = -77$, $n =$

Solution:

and $a_k =$, $k =$

$$d = \frac{-77 - \boxed{}}{\boxed{} - \boxed{}}$$

$$d = \frac{\boxed{}}{\boxed{}}$$

$$d = \boxed{}$$

Therefore, to complete the sequence:

$$\begin{array}{ccccccccc} \boxed{} & \boxed{} & \boxed{-2} & \boxed{} & \boxed{} & \boxed{} & \cdots & \boxed{-77} & \cdots & \boxed{} \\ a_1 & a_2 & a_3 & a_4 & a_5 & a_6 & & a_{18} & & a_{50} \end{array}$$

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LIVE WORKSHEETS