

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 $a_n = 162$, $n =$
and $a_k =$, $k =$

Solution:

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

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

$$d = \boxed{}$$

Therefore, to complete the sequence:

| | | | | | | | | | |
|----------------------|----------------------|----------------------|-----------|----------------------|----------------------|-----|------------|-----|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | 52 | <input type="text"/> | <input type="text"/> | ... | 162 | ... | <input type="text"/> |
| a_1 | a_2 | a_3 | a_4 | a_5 | a_6 | | a_{15} | | a_{40} |

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

Take $a_n = -77$, $n =$
and $a_k =$, $k =$

Solution:

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

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

$$d = \boxed{}$$

Therefore, to complete the sequence:

| | | | | | | | | | |
|----------------------|----------------------|-----------|----------------------|----------------------|----------------------|-----|------------|-----|----------------------|
| <input type="text"/> | <input type="text"/> | -2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | ... | -77 | ... | <input type="text"/> |
| a_1 | a_2 | a_3 | a_4 | a_5 | a_6 | | a_{18} | | a_{50} |

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LIVEWORKSHEETS