Introduction to Arithmetic Sequences – Day 2

Unit 6: Representations of Linear Relations

Determine if the sequence is arithmetic. If it is, find the common difference.

1. 1, 9, 25, 49, ...

$9-(1)=8$

$25-(9)=16$

$49-(25)=24$

Not Arithmetic

2. −22, −222, −422, −622, ...

$-222-(-22)=-200$

$-422-(-222)=-200$

$-622-(-422)=-200$

Arithmetic $d=-200$

3. −33, −63, −93, −123, ...

$-63-(-33)=-30$

$-93-(-63)=-30$

$-123-(-93)=-30$

Arithmetic $d=-30$

4. 16, 20, 24, 28, ...

$20-(16)=4$

$24-(20)=4$

$28-(24)=4$

Arithmetic $d=4$

5. −16, −13, −10, −7, ...

$-13-(-16)=3$

$-10-(-13)=3$

$-7-(-10)=3$

Arithmetic $d=3$

6. 10, −90, −190, −290, ...

$-90-(10)=-100$

$-190-(-90)=-100$

$-290-(-190)=-100$

Arithmetic $d=-100$

7. 21, 27, 33, 39, ...

$27-(21)=6$

$33-(27)=6$

$39-(33)=6$

Arithmetic $d=6$

8. 26, 28, 30, 32, ...

$28-(26)=2$

$30-(28)=2$

$32-(30)=2$

Arithmetic $d=2$

9. 17, 12, 7, 2, ...

$12-(17)=-5$

$7-(12)=-5$

$2-(7)=-5$

Arithmetic $d=-5$

10. 27, 24, 21, 18, ...

$24-(27)=-3$

$21-(24)=-3$

$18-(21)=-3$

Arithmetic $d=-3$

11. 33, −167, −367, −567, ...

$-167 - (33) = -200$
$-367 - (-167) = -200$
$-567 - (-367) = -200$

Arithmetic $d = -200$

12. −31, −21, −11, −1, ...

$-21 - (-31) = 10$
$-11 - (-21) = 10$
$-1 - (-11) = 10$

Arithmetic $d = 10$

13. −8, −6, −4, −2, ...

$-6 - (-8) = 2$
$-4 - (-6) = 2$
$-2 - (-4) = 2$

Arithmetic $d = 2$

14. −4, −104, −204, −304, ...

$-104 - (-4) = -100$
$-204 - (-104) = -100$
$-304 - (-204) = -100$

Arithmetic $d = -100$

15. −32, −62, −92, −122, ...

$-62 - (-32) = -30$
$-92 - (-62) = -30$
$-122 - (-92) = -30$

Arithmetic $d = -30$

16. −39, −34, −29, −24, ...

$-34 - (-39) = 5$
$-29 - (-34) = 5$
$-24 - (-29) = 5$

Arithmetic $d = 5$

17. −31, −41, −51, −61, ...

$-41 - (-31) = -10$
$-51 - (-41) = -10$
$-61 - (-51) = -10$

Arithmetic $d = -10$

18. −16, −23, −30, −37, ...

$-23 - (-16) = -7$
$-30 - (-23) = -7$
$-37 - (-30) = -7$

Arithmetic $d = -7$

19. −33, −43, −53, −63, ...

$-43 - (-33) = -10$
$-53 - (-43) = -10$
$-63 - (-53) = -10$

Arithmetic $d = -10$

20. 14, 146, 1466, 14666, ...

$146 - (14) = 132$
$1466 - (146) = 1320$
$14666 - (1466) = 13200$

Not Arithmetic