Class 10 Mathematics · Chapter 5: Arithmetic Progressions

Worksheet · 20 marks · about 40 minutes · based on NCERT

Name _____ Class and section _____ Date _____

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1. The common difference of the AP 17, 11, 5, −1, . . . is [1]

(a) 11 (b) 6
(c) −6 (d) −1

2. The 12th term of the AP 9, 5, 1, . . . is [1]

(a) 53 (b) −39
(c) −35 (d) −31

3. In the AP a, a + d, a + 2d, . . ., the term a + 19d is the [1]

(a) 19th term (b) 20th term
(c) 21st term (d) 18th term

4. Which of the following is enough to write down every term of an AP? [1]

(a) its first term and its common difference (b) its common difference alone
(c) its first term alone (d) the number of its terms

5. The sum of the first 25 terms of the AP −4, −4, −4, . . . is [1]

(a) −4 (b) −100
(c) 0 (d) 100

6. Find k if k + 9, 2k − 1 and 2k + 7 are consecutive terms of an AP. [2]

7. The 4th term of an AP is 11 and its 9th term is 31. Find the AP. [2]

8. Show that $\sqrt{20}$, $\sqrt{45}$, $\sqrt{80}$, $\sqrt{125}$ form an AP, and write its next term. [2]

9. A power-loom unit in Bhiwandi wove 42,000 metres of cloth in its first 15 days of production. Each day it wove 300 metres more than the day before. Find how much it wove on the first day and on the fifteenth day. [3]

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10. Find the sum of all the multiples of 11 that lie between 100 and 400. [3]

11. The nth term of a list is $a_n = 11 - 4n$. Show that the list is an AP, find which term is −89, and find the sum of the terms up to and including that term. [3]

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