Chapter - 4

Quadratic Equations

1. The common difference of an arithmetic progression is 6. If the first term is 3, what is the 10th term?

A. 57

B. 60

C. 63

D. 66

Answer: D. 66

2. Find the sum of first 20 terms of the arithmetic progression 4, 9, 14, 19, ...

A. 1,020

B. 1,120

C. 1,220

D. 1,320

Answer: C. 1,220

3. The sum of first n terms of an arithmetic progression is given by $Sn = 3n^2 + 2n$. What is the common difference of the arithmetic progression?

A. 1

B. 2

C. 3

D. 4

Answer:C. 3

4. If the sum of first n terms of an arithmetic progression is given by Sn = 4n^2 - 3n, what is the 10th term of the arithmetic progression?

A. 34

B. 44

C. 54

D. 64

Answer: D. 64

5. The 7th term of an arithmetic progression is 15 and the 13th term is 33. What is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: A. 3

6. If the sum of first 16 terms of an arithmetic progression is 320 and the common difference is 3, what is the first term of the arithmetic progression?

A. 2

B. 3

C. 4

D. 5

Answer: B. 3

7. If the 4th term of an arithmetic progression is 17 and the 7th term is 26, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

8. The sum of the first n terms of an arithmetic progression is given by Sn = 2n^2 + 5n. What is the 15th term of the arithmetic progression if the first term is 3?

A. 43

B. 48

C. 53

D. 58

Answer: C. 53

9. The sum of first 50 terms of an arithmetic progression is 1,250. If the common difference is 5, what is the first term of the arithmetic progression?

A. 5

B. 10

C. 15

D. 20

Answer: A. 5

10. If the 10th term of an arithmetic progression is 30 and the 20th term is 50, what is the common difference of the arithmetic progression?

A. 2

B. 3

C. 4

D. 5

Answer: B. 3

11. The sum of first n terms of an arithmetic progression is given by Sn = 3n^2 - 2n. What is the 8th term of the arithmetic progression?

A. 67

B. 69

C. 71

D. 73

Answer: B. 69

12. If the sum of first 12 terms of an arithmetic progression is 228 and the common difference is 3, what is the 12th term of the arithmetic progression?

A. 33

B. 36

C. 39

D. 42

Answer: D. 42

13. The first term of an arithmetic progression is 6 and the common difference is 4. What is the 12th term of the arithmetic progression?

A. 46

B. 50

C. 54

D. 58

Answer: C. 54

14. If the sum of first n terms of an arithmetic progression is given by Sn = 4n^2 - n, what is the 15th term of the arithmetic progression?

A. 221

B. 225

C. 229

D. 233

Answer: D. 233

15. If the 5th term of an arithmetic progression is 11 and the 10th term is 26, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

16. The sum of first n terms of an arithmetic progression is given by $Sn = 5n^2 - 3n$. What is the 20th term of the arithmetic progression if the first term is 2?

A. 2

B. 7

C. 12

D. 17

Answer: D. 17

17. If the sum of first 15 terms of an arithmetic progression is 450 and the common difference is 3, what is the 10th term of the arithmetic progression?

A. 22

B. 25

C. 28

D. 31

Answer: C. 28

18. The first term of an arithmetic progression is 8 and the common difference is 6. What is the 20th term of the arithmetic progression?

A. 118

B. 120

C. 122

D. 124

Answer: D. 124

19. If the sum of first n terms of an arithmetic progression is given by Sn = 4n^2 + 7n, what is the 12th term of the arithmetic progression?

A. 157

B. 161

C. 165

D. 169

Answer: C. 165

20. If the 7th term of an arithmetic progression is 17 and the 13th term is 41, what is the common difference of the arithmetic progression?

A. 4

B. 5

C. 6

D. 7

Answer: B. 5

21. The sum of first n terms of an arithmetic progression is given by Sn = 2n^2 - 3n. What is the 25th term of the arithmetic progression if the first term is 1?

A. 47

B. 49

C. 51

D. 53

Answer: C. 51

22. If the sum of first 20 terms of an arithmetic progression is 340 and the common difference is 3, what is the 5th term of the arithmetic progression?

A. 5

B. 8

C. 11

D. 14

Answer: B. 8

23. If the 6th term of an arithmetic progression is 14 and the 11th term is 29, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

24. If the sum of first n terms of an arithmetic progression is given by Sn = 3n^2 + 2n, what is the 7th term of the arithmetic progression if the first term is 1?

A. 16

B. 19

C. 22

D. 25

Answer: A. 16

25. The sum of first n terms of an arithmetic progression is given by Sn = 4n^2 - n. What is the 20th term of the arithmetic progression if the first term is 3?

A. 77

B. 81

C. 85

D. 89

Answer: B. 81

26. The sum of first 10 terms of an arithmetic progression is 155 and the sum of the next 10 terms is 355. What is the 20th term of the arithmetic progression?

A. 32

B. 35

C. 38

D. 41

Answer: C. 38

27. If the 3rd term of an arithmetic progression is 4 and the 7th term is 16, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

28. The sum of first n terms of an arithmetic progression is given by Sn = 5n^2 - n. What is the 15th term of the arithmetic progression if the first term is 2?

A. 56

B. 61

C. 66

D. 71

Answer: D. 71

29. If the 5th term of an arithmetic progression is 4 and the 15th term is -16, what is the common difference of the arithmetic progression?

A. -2

B. -3

C. -4

D. -5

Answer: B. -3

30. The sum of first n terms of an arithmetic progression is given by Sn = 6n^2 - 3n. What is the 12th term of the arithmetic progression if the first term is 4?

A. 64

B. 68

C. 72

D. 76

Answer: C. 72

31. If the 4th term of an arithmetic progression is 10 and the 7th term is 19, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

32. The sum of first n terms of an arithmetic progression is given by Sn = 6n^2 - 3n. What is the 12th term of the arithmetic progression if the first term is 4?

A. 64

B. 68

C. 72

D. 76

Answer: C. 72

33. If the 4th term of an arithmetic progression is 10 and the 7th term is 19, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

34. The sum of first n terms of an arithmetic progression is given by Sn = 7n^2 - 2n. What is the 10th term of the arithmetic progression if the first term is 3?
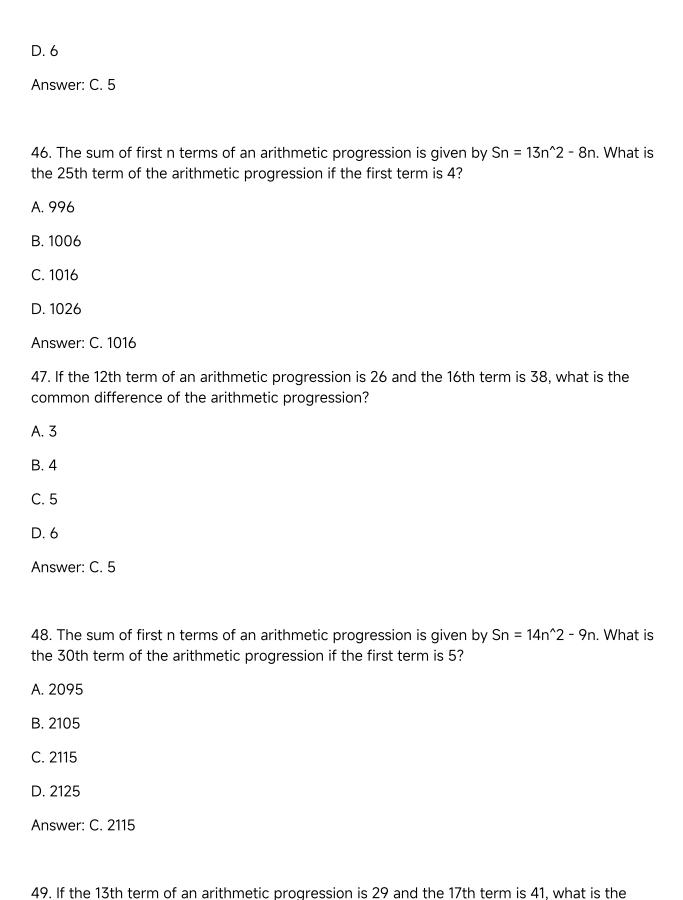
A. 57

B. 62

C. 67

D. 72

Answer: B. 62

35. If the 6th term of an arithmetic progression is 14 and the 10th term is 26, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

36. The sum of first n terms of an arithmetic progression is given by Sn = 8n^2 - 3n. What is the 14th term of the arithmetic progression if the first term is 2?

A. 94

B. 98

C. 102

D. 106

Answer: B. 98

37. If the 7th term of an arithmetic progression is 13 and the 11th term is 23, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

38. The sum of first n terms of an arithmetic progression is given by Sn = 9n^2 - 4n. What is the 20th term of the arithmetic progression if the first term is 5?

A. 345

B. 355

C. 365

D. 375

Answer: B. 355

39. If the 8th term of an arithmetic progression is 15 and the 12th term is 23, what is the common difference of the arithmetic progression?

A. 2

B. 3

C. 4

D. 5

Answer: C. 4

40. The sum of first n terms of an arithmetic progression is given by $Sn = 10n^2 - 5n$. What is the 15th term of the arithmetic progression if the first term is 1?

A. 220

B. 225

C. 230

D. 235

Answer: C. 230

41. If the 9th term of an arithmetic progression is 17 and the 13th term is 29, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: B. 4

42. The sum of first n terms of an arithmetic progression is given by $Sn = 11n^2 - 6n$. What is the 18th term of the arithmetic progression if the first term is 3?

A. 301

B. 311

C. 321

D. 331

Answer: C. 321

43. If the 10th term of an arithmetic progression is 23 and the 14th term is 35, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

44. The sum of first n terms of an arithmetic progression is given by Sn = 12n^2 - 7n. What is the 22nd term of the arithmetic progression if the first term is 2?

A. 537

B. 547

C. 557

D. 567

Answer: B. 547

45. If the 11th term of an arithmetic progression is 20 and the 15th term is 32, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

46. The sum of first n terms of an arithmetic progression is given by Sn = 13n^2 - 8n. What is the 25th term of the arithmetic progression if the first term is 4?

A. 996

B. 1006

C. 1016

D. 1026

Answer: C. 1016

47. If the 12th term of an arithmetic progression is 26 and the 16th term is 38, what is the common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

48. The sum of first n terms of an arithmetic progression is given by Sn = 14n^2 - 9n. What is the 30th term of the arithmetic progression if the first term is 5?

A. 2095

B. 2105

C. 2115

D. 2125

Answer: C. 2115

49. If the 13th term of an arithmetic progression is 29 and the 17th term is 41, what is the

common difference of the arithmetic progression?

A. 3

B. 4

C. 5

D. 6

Answer: C. 5

50. The sum of first n terms of an arithmetic progression is given by Sn = 15n^2 - 10n. What is the 35th term of the arithmetic progression if the first term is 6?

A. 3225

B. 3235

C. 3245

D. 3255

Answer: C. 3245