

MODULE 6

LESSON 2

QUIZ

1. Write the first five terms of the arithmetic sequence with $a_1 = -2.6$ and $d = -0.4$.

A. $-2.6, -6.6, -10.6, -14.6, -18.6$

B. $-2.6, -3, -3.4, -3.8, -4.2$

C. $-2.6, -2.2, -1.8, -1.4, -1$

D. $0.4, -3, -5.6, -8.2, -10.8$

Go to answer 1

2. If the first term of an arithmetic sequence is 6 and the common difference is -5 , then find the fifth term.

A. 26

B. -14

C. -15

D. -9

Go to answer 2

3. If the first term of an arithmetic sequence is 5 and the third term is 2, then find the seventh term.

A. 26

B. -14

C. -4

D. 9

Go to answer 3

4. Write the first five terms of the arithmetic sequence with $a_8 = 26$ and $a_{12} = 42$.

A. $-2, 2, 6, 10, 14$

B. $4, 8, 12, 16, 20$

C. $-6, -2, 2, 6, 10$

D. $2, 6, 10, 14, 18$

Go to answer 4

5. Find a_n for the arithmetic sequence: $4, \frac{3}{2}, -1, -\frac{7}{2}, \dots, n = 10$.

A. $\frac{45}{2}$

B. -21

C. $-\frac{37}{2}$

D. -25

Go to answer 5

6. Find the sum of the arithmetic sequence with $a_1 = 100$, $a_{25} = 220$, and $n = 25$.

A. 4000

B. 1280

C. 320

D. 8000

Go to answer 6

7. Find the sum of the arithmetic sequence: $9 + 6 + 3 + \dots + (17^{\text{th}} \text{ term})$.

A. 561

B. 66

C. 1122

D. 2244

Go to answer 7

8. Find the sum:

$$\sum_{n=1}^{100} 5n$$

A. 50,500

B. 505

C. 12,625

D. 25,250

Go to answer 8

9. Find the sum:

$$\sum_{n=0}^{50} (1000 - 5n)$$

A. 1745

B. 44,625

C. 87,250

D. 43,625

Go to answer 9

10. Evaluate:

$$\sum_{n=1}^{20} \left(\frac{2}{3}n + \frac{1}{3} \right)$$

.

A. $\frac{41}{3}$

B. $\frac{40}{3}$

C. $\frac{440}{3}$

D. $\frac{210}{3}$

Go to answer 10

11. Question.

A.

B.

C.

D.

Go to answer 11

12. Question.

A.

B.

C.

D.

Go to answer 12

13. Question.

A.

B.

C.

D.

Go to answer 13

14. Question.

A.

B.

C.

D.

Go to answer 14

15. Question.

A.

B.

C.

D.

Go to answer 15

16. Question.

A.

B.

C.

D.

Go to answer 16

17. Question.

A.

B.

C.

D.

Go to answer 17

18. Question.

A.

B.

C.

D.

Go to answer 18

19. Question.

A.

B.

C.

D.

Go to answer 19

20. Question.

A.

B.

C.

D.

Go to answer 20

ANSWERS

1. Answer to Question 1 is "B".

An arithmetic sequence is of the form $a_1, a_1 + d, a_1 + 2d, \dots, a_1 + (n - 1)d$ where a_1 is the first term, d is the common difference, and $a_1 + (n - 1)d$ is the n^{th} term.

Go back 1

2. Answer to Question 2 is "B".

Go back 2

3. Answer to Question 3 is "C".

$$a_1 = 5, a_3 = 2$$

$$a_3 = a_1 + (n - 1)d$$

$$2 = 5 + (3 - 1)d$$

$$2 = 5 + 2d$$

$$-3 = 2d$$

$$d = \frac{-3}{2}$$

Thus,

$$a_1 = 5 + (7 - 1)\left(\frac{-3}{2}\right)$$

$$a_1 = 5 + 6\left(\frac{-3}{2}\right)$$

$$a_1 = -4$$

Go back 3

4. Answer to Question 4 is "A".

Go back 4

5. Answer to Question 5 is "C".

Go back 5

6. Answer to Question 6 is "A".

$$S_n = \left(\frac{n}{2}\right)(a_1 + a_n) \text{ or } S_{25} = \frac{25}{2}(100 + 220) = 4000$$

Go back 6

7. Answer to Question 7 is "A".

Go back 7

8. Answer to Question 8 is "D".

Go back 8

9. Answer to Question 9 is "B".

$$a_1 = 1000 - 5 \cdot 1 = 995. \quad a_{50} = 1000 - 5 \cdot 50 = 750.$$

$$\sum_{n=0}^{50} (1000 - 5n) = 1000 + \sum_{n=1}^{50} (1000 - 5n)$$

$$\sum_{n=0}^{50} (1000 - 5n) = 1000 + \frac{50}{2}(995 + 750)$$

$$\sum_{n=0}^{50} (1000 - 5n) = 44,625$$

Go back 9

10. Answer to Question 10 is "C".

Go back 10

11. Answer to Question 11 is "".

Go back 11

12. Answer to Question 12 is "".

Go back 12

13. Answer to Question 13 is "B".

Go back 13

14. Answer to Question 14 is "".

Go back 14

15. Answer to Question 15 is "".

Go back 15

16. Answer to Question 16 is "C".

Go back 16

17. Answer to Question 17 is "".

Go back 17

18. Answer to Question 18 is "".

Go back 18

19. Answer to Question 19 is "".

Go back 19

20. Answer to Question 20 is "".

Go back 20