

Find the arithmetic means between :

6. a and $5a$.

8. $\frac{x^2 - y^2}{x}$ and $\frac{x^2 + y^2}{x}$.

7. $\frac{1}{a}$ and $\frac{1}{b}$.

9. $\frac{a - b}{2}$ and $\frac{3a + b}{2}$.

Find the series in which :

10. The 5th term is 19, and the 8th term is 31.

11. The 9th term is 12, and the 17th term is 60.

12. The 4th term is -1 , and the 9th term is -2 .

13. The 12th term of an A. P. is 14, and the 20th term is -6 . Find the 28th term.

14. The sum of three numbers in A. P. is 18, and their product is 192. Find the numbers.

HINT. Let $x - y, x, x + y$, represent the numbers.

15. The sum of three numbers in A. P. is 9, and the sum of their squares is 29. What are the numbers ?

16. The sum of five numbers in A. P. is 25, and the sum of their squares is 135. Find the numbers.

17. The sum of four numbers in A. P. is 20, and their product is 384. Find the numbers.

HINT. Let $x - 3y, x - y, x + y, x + 3y$ represent the A. P.

18. How many times does a common clock strike in 12 hours?

19. A bookkeeper receives every year an increase of \$ 100. How many dollars did he receive in 15 years if he received \$ 1200 during the first year ?

20. For boring a well 200 yards deep a contractor receives \$1.00 for the first yard, and for each yard thereafter 1¢ more than for the preceding one. How much does he receive all together ?