Answer key

The method: Arithmetic series

Count the terms: n = (last − first) ÷ d + 1. Then $S_n = n(a_1 + a_n) \div 2$.

$$-2 - 10 - 18 + \ldots - 194 = -2450$$

$\frac{-194 - (-2)}{-8} + 1 = 25$ how many terms: n = (last − first) ÷ d + 1

$\frac{25(-2 + (-194))}{2} = -2450$ $S_n = n(a_1 + a_n) \div 2$

$$13 + 22 + 31 + \ldots + 292 = 4880$$

$\frac{292 - 13}{9} + 1 = 32$ how many terms: n = (last − first) ÷ d + 1

$\frac{32(13 + 292)}{2} = 4880$ $S_n = n(a_1 + a_n) \div 2$

Problems 1 and 2 worked out · Version 0A

$$17 + 22 + 27 + \ldots + 127 = 1656$$

$\frac{127 - 17}{5} + 1 = 23$ how many terms: n = (last − first) ÷ d + 1

$\frac{23(17 + 127)}{2} = 1656$ $S_n = n(a_1 + a_n) \div 2$

$$12 + 13 + 14 + \ldots + 30 = 399$$

$\frac{30 - 12}{1} + 1 = 19$ how many terms: n = (last − first) ÷ d + 1

$\frac{19(12 + 30)}{2} = 399$ $S_n = n(a_1 + a_n) \div 2$

Arithmetic series · Version 0A

1) 1656 2) 399 3) 369 4) −66 5) −18
6) −1495 7) −144 8) 4154 9) 690 10) 1518
11) 377 12) 3159 13) −851 14) −45 15) 1178
16) 165 17) 332 18) 105