Progressions et suites de réels

1. Suites arithmétiques

$$t_n = t_1 + (n-1) \cdot r$$

$$S_n = n \cdot \frac{t_1 + t_n}{2}$$

Exercices:

Exercice 1.

t_1 = 1.5

t_{16} = 6.5

r = ?

S_{16} = ?

Exercice 2.

t_1 = 0.1

t_9 = 14.5

r = ?

S_9 = ?

Exercice 3.

t_1 = 4

t_{21} = 144

r = ?

S_{10} = ?

Exercice 4.

t_1 = 3

S_{50} = 8725

r = ?

t_{50} = ?

Exercice 5.

t_1 = 5

S_{20} = 138.

r = ?

t_{17} = ?

Exercice 6.

t_1 = 1

S_{20} = 495.

r = ?

t_{30} = ?

Exercice 7.

t_1 = 5

t_n = 62

S_n = 670

n = ?

Exercice 8.

t_1 = 2

t_n = 8.

S_n = 80.

n = ?

Exercice 9.

t_1 = 8

t_n = 152

r = 6

n = ?

Exercice 10.

t_1 = 1

t_n = 121

S_n = 1525

r = ?

Solutions:

Exercice 1.

$t_1 = 1.5$

$t_{16} = 6.5$

$r = \frac{1}{3}$

$S_{16} = 64.$

Exercice 2.

$t_1 = 0.1$

$t_9 = 14.5$

$r = 1.8$

$S_9 = 65.7$

Exercice 3.

$t_1 = 4$

$t_{21} = 144$

$r = 7$

$S_{10} = 355$

Exercice 4.

$t_1 = 3$

$S_{50} = 8725$

$r = 7$

$t_{50} = 346$

Exercice 5.

$t_1 = 5$

$S_{20} = 138.$

$r = 0.2$

$t_{17} = 8.2$

Exercice 6.

$t_1 = 1$

$S_{20} = 495.$

$r = 2.5$

$t_{30} = 73.5$

Exercice 7.

$t_1 = 5$

$t_n = 62$

$S_n = 670$

$n = 20$

Exercice 8.

$t_1 = 2$

$t_n = 8.$

$S_n = 80.$

$n = 16$

Exercice 9.

$t_1 = 8$

$t_n = 152$

$r = 6$

$n = 25$

Exercice 10.

$t_1 = 1$

$t_n = 121$

$S_n = 1525$

$r = 5$