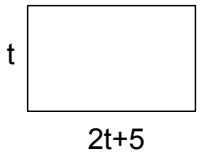
0 (a). Evaluate $\dfrac{3^2-1}{2^2}$.

0 (b). Let t=TNYWR.

Determine the perimeter of the rectangle below.



0 (c). Let t=TNYWR.

In the quadratic equation $x^2 - tx - 6t^2 = 0$, the positive root is a.
Determine the value of a.

1 (a). In the sequence, $1, 3, 5, 7, \ldots$, each term after the first is two larger than the previous term.
What is the sum of the first 12 terms in this sequence?

1 (b). Let t=TNYWR.

The point (k, t) is on the line $3x - y - 6 = 0$. Find the value of k.

1 (c). Let t=TNYWR.

A square with side length t is changed into a rectangle by adding k to its length and subtracting k from its width. What is the smallest positive integer value of k for which the new rectangle has area less than 2013?

2 (a). Evaluate

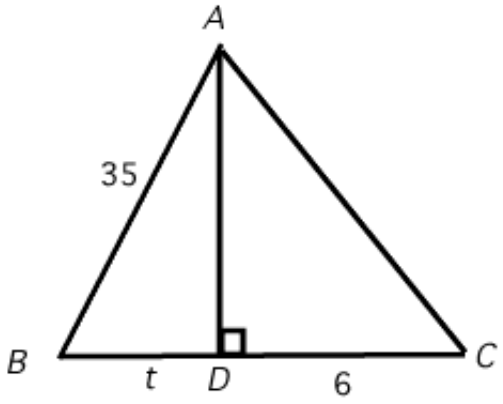
$$\frac{\frac{1}{2}+\frac{1}{3}}{\frac{1}{2}\times\frac{1}{3}}.$$

2 (b). Let t=TNYWR.

Peter lists the prime numbers in increasing order. Determine the average of the $2t$th and $2t+1$th numbers in his list.

2 (c). Let t=TNYWR.

In the diagram, D lies on side BC of $\triangle ABC$ with AD perpendicular to BC.
If $AB = 35$, $BD = t$ and $DC = 6$, what is the length of AC?



3 (a). In the sum
$$\begin{array}{r} 2\,0\,A\;\;B \\ +\;1\,3\,A\;\;B \\ \hline 3\,B\,0\;\;8 \end{array}$$
, A and B are non-zero digits.
Determine the value of A.

3 (b). Let t=TNYWR.

The lines $x + y = k$ and $x - ty = -8$ intersect on the line $y = x$. Determine the value of k.

3 (c). Let t=TNYWR.

In the diagram, the circle has centre O and radius t. Square $ABCD$ has side length t.
The overlapping area is shaded. What is the positive difference between the unshaded area of the square and the circle? Round your answer to the nearest integer.