

0 (a). Evaluate $2 + 0 + 1 + 5$.

0 (b). Let t be TNYWR.
The average of the five numbers 12, 15, 9, 14, 10 is m .
The average of the four numbers 24, t , 8, 12 is n .
What is the value of $n - m$?

0 (c). Let t be TNYWR.
The lines with equations $y = 13$ and $y = 3x + t$ intersect at the point (a, b) . What is the value of a ?

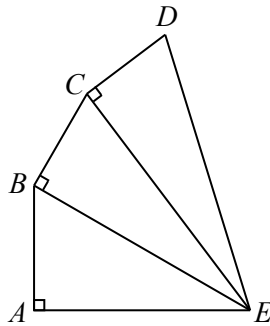
1 (a). If $2^{k+4} = 1024$, what is the value of k ?

1 (b). Let t be TNYWR.

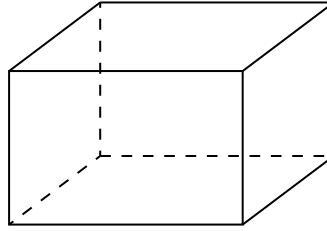
If $2t + 2x - t - 3x + 4x + 2t = 30$, what is the value of x ?

1 (c). Let t be TNYWR.

In the diagram, $\angle BAE = \angle CBE = \angle DCE = 90^\circ$. If $AE = \sqrt{5}$, $AB = \sqrt{4}$, $BC = \sqrt{3}$, and $CD = \sqrt{t}$, what is the length of DE ?

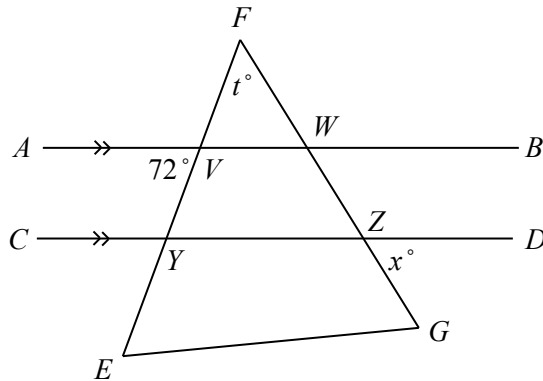


- 3 (a). What is the surface area of a rectangular prism with edge lengths of 2, 3 and 4?



- 3 (b). Let t be TNYWR.

In the diagram, line segments AB and CD are parallel. AB intersects EF at V and GF at W . CD intersects EF at Y and GF at Z . If $\angle AVE = 72^\circ$, $\angle EFG = t^\circ$, and $\angle GZD = x^\circ$, what is the value of x ?



- 3 (c). Let t be TNYWR.

Determine the number of integers $b > 0$ for which $30t$ is divisible by $b!$.

(If n is a positive integer, the symbol $n!$ (read “ n factorial”) represents the product of the integers from 1 to n . For example, $4! = (1)(2)(3)(4)$ or $4! = 24$.)