The nth triangular number is given by n * (n + 1) / 2. Create a sequence of the first 20 triangular numbers. R has a built-in constant, letters, that contains the lowercase letters of the Roman alphabet. Name the elements of the vector that you just created with the first 20 letters of the alphabet. Select the triangular numbers where the name is a vowel.

Code	Solution

n<-1:20
n
x<- n *(n + 1) / 2
x
letters[1:20]
names(x)<-letters[1:20]
x
vowels = c("a", "e", "i", "o", "u")
x[vowels]
	> n<-1:20
	> n
	 [1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
	> x<- n *(n + 1) / 2
	> x
	 [1] 1 3 6 10 15 21 28 36 45 55 66 78 91 105 120 136 153 171 190
	[20] 210
	> letters[1:20]
	 [1] "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l" "m" "n" "o" "p" "q" "r" "s"
	[20] "t"
	> names(x)<-letters[1:20]
	> x
	  a b c d e f g h i j k l m n o p q r s t
	  1 3 6 10 15 21 28 36 45 55 66 78 91 105 120 136 153 171 190 210
	> vowels = c("a", "e", "i", "o", "u")
	> x[vowels]
	  a e i o <NA>
	  1 15 45 120 NA