Question #42059

Condition.

	A	B	C	D
cost	14000	13000	14500	16000
Admin fee	145	170	140	130
HR staff needed	3	4	4	3
Hours to complete training	25	28	25	30

Solution.

Cost of program=cost+admin fee+20*(HR staff needed)*(hours to complete training)+n*12.5*(hours to complete training)
n- new employees

we can get system of equations:

$$\begin{cases} 15645 + 312.5n_A = C \\ 15410 + 350n_B = C \\ 14840 + 312.5n_C = C \\ 17930 + 375n_D = C \end{cases}$$

Where
n_A, n_B, n_C, n_D - new employees for each program
C – cost of each program

$n_A = 6$
$n_B = -15$
$n_C = -49$
$n_D = C/375 – 47$

when C = 17928.75 $ □> $n_D = 0$

Answer.

As start cost of **program A** is less than cost of **program D** for case if no new employees as **program A** is more cost efficiently than **program D**.
And also, it is more cost efficiently than **programs B,C** (they have negative values of number of new employees).
So, program A is the most cost efficiently (answer A)).