Problem 6-32

Given the following table of data:

		Location			
Criteria	**Weight**	**1**	**2**	**3**	**4**
Raw material availability	0.13	P	P	VG	VG
Infrastructure	0.06	P	G	OK	P
Transportation costs	0.28	VG	P	P	P
Labor relation	0.21	OK	G	OK	OK
Quality of life	0.32	P	OK	G	VG

Where:
VG = Very good 5 pts
G = Good 4 pts
OK = Acceptable 3pts
P = Poor 1 pt

In order to determine the best and worst location, we need to calculate each locations total points. This is done by multiplying each criterias weight against its associated point value. Doing that gives us:

Location 1: $0.13(1) + 0.06(1) + 0.28(5) + 0.21(3) + 0.32(1) = 2.54$

Location 2: $0.13(1) + 0.06(4) + 0.28(1) + 0.21(4) + 0.32(3) = 2.45$

Location 3: $0.13(5) + 0.06(3) + 0.28(1) + 0.21(3) + 0.32(4) = 3.02$

Location 4: $0.13(5) + 0.06(1) + 0.28(1) + 0.21(3) + 0.32(5) = 3.22$

Using these results, we can conclude **Location 4** is the best location and **Location 2** is the worst location.