

1. Fred's Taxi Company $C=0.5D+5$
 P&G Taxi Company $C=0.65D+2$
 Flatrate Taxi Company $C=60km=25$ ①

2. City Centre Port
 Fred's Taxi Company $C = 0.50(17) + 5 = 8.5 + 5 = \13.50 (city centre)
 $C = 0.50(24) + 5 = 12 + 5 = \17 (port)

- P and G Taxi Company $C = 0.65(17) + 2 = 11.05 + 2 = \13.05 (city centre)
 $C = 0.65(24) + 2 = 15.6 + 2 = \17.60 (port)

- Flatrate Taxi Company $C = \$25.00$ (both port and city)

I would recommend to use P and G Taxi Company to travel to the city centre. I would recommend Fred's taxi Company to travel to port. ②

- 3.
- | P&G | Freds | Flatrate |
|--------------------|-------------------|---------------|
| $C = 0.65(20)+2$ | $C = 0.5(20) + 5$ | $C = \$25.00$ |
| $C = 13 + 2$ | $C = 10 + 5$ | |
| $C = \$15.00$ | $C = \$15.00$ | |
| $C = 0.65(19) + 2$ | $C = 0.5(19) + 5$ | $C = \$25.00$ |
| $C = 12.35 + 2$ | $C = 9.5 + 5$ | |
| $C = \$14.35$ | $C = \$14.50$ | |
- ③

P&G is the cheapest for up to 20km

4. In order for Fred to make his company the cheapest for people to use to travel to any destination he will need to change his flat rate to be cheapest for short trips and change his charge per kilometre in order to be cheapest over longer trips.

I would recommend that Fred change to one of these two options

1. $C = 0.35D + 3$ (covers both short and long distance trips).
 2. $C = 24$ (over 35km and up to 60km) and $C = 0.60D+2$ (under 35km trips)
- ④

Fred could then charge the second rate if his client wants to travel over 60km.(only charge for every extra km travelled and add the \$24.00 after)
 In the long run Fred would make more money if he used option 2.