

Example: Advertising



- Chery Automobile
 - One of the largest Chinese automobile manufacturers.
 - The top Chinese vehicle exporter in recent years.
- Chery QQ
 - QQ has been Chery's most sold model
 - "a legend in the Chinese automobile history ... a mini model with the highest cumulative sales in China"



MGT 40750 – Quantitative Decision Modeling

Chery QQ



- Guinness World Records
 - Set a world record of “four-vehicle crossing” in 2010: maximum vertical distance of 6 meters
2 Chery QQ and 2 motorcycles leap from 4 directions. When the 4 vehicles form a vertical line, the distance of the highest motorcycle and the lowest QQ cannot exceed 6 meters.
 - Broke the world record of “narrowest drifting” in 2009: 32cm

**ONLY
\$ 4,400 !!!**

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- Chery Automobile advertises its QQ model in a variety of 30-second television ads, and these ads can be placed in a variety of television shows. The ads in different shows vary by cost – some 30-second slots are much more expensive than others – and by the types of viewers they are likely to reach.
- The company has segmented the potential viewers into six mutually exclusive categories:
 - males age 18 to 35
 - males age 36 to 55
 - males over 55
 - females age 18 to 35
 - females age 36 to 55
 - females over 55

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- A rating service can supply data on numbers of viewers in each of these categories who will watch a 30-second ad on any particular television show. Each such viewer is called an *exposure*.
- Chery has determined the required number of exposures it wants to obtain for each group.
- Detailed data on costs per ad, numbers of exposures per ad, and minimal required exposures can be found in Excel file “Chery Advertising.xlsx”, where numbers of exposures are expressed in millions, and costs are in thousands of dollars.
- Chery wants to know how many ads to place on each of the several television shows to obtain these required exposures at a minimum cost.