

## SEM Slides Exercise Solution

### Slide #28

Broad match: formal shoes	1-9
Broad match modifier: formal +shoes	4-9
Broad match modifier: formal +shoes	6-9
Broad match modifier: -formal +shoes	4-5
Phrase match: "formal shoes"	7-9
Exact match: [formal shoes]	9

### Slide #52

Advertiser	Bid	Quality Score (QS)	AdRank (=Bid x QS)	Position	Price Per Click (=AdRank <sub>i,1</sub> /QS <sub>i</sub> )
A	\$.50	8	4.0	1	$3.0/8 + 0.01 = \$.39$
B	\$.50	6	3.0	2	$1.5/6 + 0.01 = \$.26$
C	\$.50	3	1.5	3	min price = \$.01

Advertiser	Bid	Quality Score (QS)	AdRank (=Bid x QS)	Position	Price Per Click (=AdRank <sub>i,1</sub> /QS <sub>i</sub> )
A	\$.50	8	4.0	1	$3.5/8 + 0.01 = \$.45$
B	\$.50	7	3.5	2	$1.5/7 + 0.01 = \$.22$
C	\$.50	3	1.5	3	min price = \$.01

Advertiser	Bid	Quality Score (QS)	AdRank (=Bid x QS)	Position	Price Per Click (=AdRank <sub>i,1</sub> /QS <sub>i</sub> )
A	\$.50	8	4.0	2	$1.5/8 + 0.01 = \$.20$
B	\$.60	7	4.2	1	$4.0/7 + 0.01 = \$.58$
C	\$.50	3	1.5	3	min price = \$.01

Advertiser	Bid	Quality Score (QS)	AdRank (=Bid x QS)	Position	Price Per Click (=AdRank <sub>i,1</sub> /QS <sub>i</sub> )
A	\$.50	8	4.0	1	$2.4/8 + 0.01 = \$.31$
B	\$.60	4	2.4	2	$1.5/4 + 0.01 = \$.39$
C	\$.50	3	1.5	3	min price = \$.01

### Slide #63

- $\$1000/\$2.50 = 400$  clicks
- $20,000 * 1.5\% * \$2 = \$600$
- $1/(\$10/\$2) = 20\%$
- CPA =  $\$0.5 * 1/5\% = \$10$ ;  
 $\$3000/\$10 = 300$  conversions.
- $\$50 - \$10 - \$5 - \$20 = \$15$
- $\$15/\$3 = 5$  clicks  
 Target CPA =  $1/5 = 20\%$ .