

# SOLUTIONS MANUAL

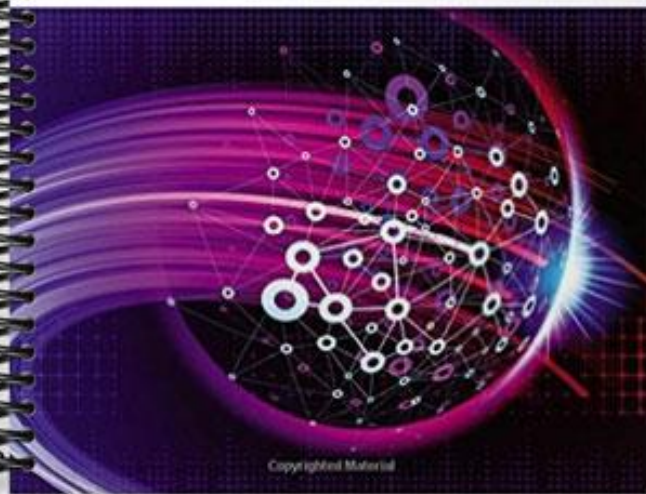
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S. CHRISTIAN ALBRIGHT | WAYNE L. WINSTON

SIXTH EDITION

## Business Analytics

Data Analysis and Decision Making



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**Business Analytics: Data Analysis and Decision Making, 6e**  
**CHAPTER 2: Describing the Distribution of a Single Variable**

Answers to Conceptual Questions

*Note to Instructors: Student answers will vary. The responses here are intended to provide general guidance in terms of concepts that could be discussed.*

- C.1. The relevant population consists of all people (adults?) in the U.S. who would consider flying commercially. This might be discovered by a survey of a lot of people (several thousand?) that first asks whether they ever have flown or might fly in the future and then asks whether the fear of terrorist attacks would change their minds. Only the people responding "Yes" to the first question would remain in the sample for analyzing the second question.
- C.2. The "number of children" is a count, so this is a discrete data type.
- C.3. A histogram is typically relevant only for a continuous variable that is binned into discrete categories, so it isn't relevant here. But a column chart of counts in states *is* relevant, and it's a close relative to a histogram.
- C.4. Depending on the difficulty of the exam, the shape could easily be skewed to the left, with the students who didn't study comprising the long left tail. But it could also be symmetric or even skewed to the right, with a few "brains" comprising the long right tail.
- C.5. This should be a time series graph, which is really a scatterplot of the number of air conditioner sales versus time, with the "dots" connected.
- C.6. The mean will be larger than the median, maybe considerably larger. This is because the large incomes in the right tail pull up the average, but they have no effect on the median.
- C.7. This is true only if the distribution, or at least the middle 50% of it, is reasonably symmetric. If it's skewed to the right, say, the median will be closer to the 1<sup>st</sup> quartile than to the 3<sup>rd</sup> quartile. This is often clear in boxplots, where the median is *not* in the middle of the box.
- C.8. The standard deviation, like the mean, is highly sensitive to outliers. Remember that in the definition of standard deviation, deviations from the mean are *squared*, so outliers on either side can really increase the standard deviation. As stated in the book, an accepted procedure when outliers are clearly present is to report measures such as the standard deviation *with* the outliers and *without* them.
- C.9. There are basically two indications: (1) the median will be about in the middle of the box, indicating that the middle 50% of the distribution is symmetric, and (2) the lines (whiskers) and outliers on either side of the box will be similar, indicating that the more extreme observations are distributed about the same on the low side as on the high side.
- C.10. It all depends. If these two salaries correspond to employees who are somehow outside the population of interest, such as top executives, it is fine to delete them. But if they aren't, then they shouldn't be deleted. For example, they might reveal a "shady" company salary policy and hence could represent the most interesting finding of the study.

This is the actual composition of the 2008 and 2009 incoming MBA classes at the Kelley School of Business at IU. Names have been omitted for confidentiality.

Student	Gender	Nationality	Gender	Count	Pct of total
1	M	USA	M	167	73.6%
2	M	USA	F	60	26.4%
3	M	India			
4	F	India	<b>Nationality</b>	<b>Count</b>	<b>Pct of total</b>
5	M	USA	Austria	1	0.4%
6	F	USA	Brazil	2	0.9%
7	M	USA	Canada	1	0.4%
8	M	USA	China	14	6.2%
9	M	USA	Croatia	1	0.4%
10	M	India	Dominican Republic	1	0.4%
11	M	India	Ecuador	1	0.4%
12	M	USA	India	46	20.3%
13	M	USA	Italy	1	0.4%
14	F	USA	Japan	4	1.8%
15	M	India	Kazakhstan	1	0.4%
16	F	Thailand	Mexico	2	0.9%
17	M	USA	Nigeria	2	0.9%
18	M	USA	Pakistan	1	0.4%
19	F	USA	Peru	1	0.4%
20	M	USA	South Korea	13	5.7%
21	M	USA	Taiwan	5	2.2%
22	M	USA	Thailand	2	0.9%
23	M	USA	USA	128	56.4%
24	M	USA			
25	M	South Korea	<b>Nationality</b>	<b>Count</b>	<b>Pct of total</b>
26	F	China	China	14	6.2%
27	F	China	India	46	20.3%
28	M	China	Japan	4	1.8%
29	M	USA	South Korea	13	5.7%
30	M	South Korea	Taiwan	5	2.2%
31	F	South Korea	USA	128	56.4%
32	F	China	Other	17	7.5%
33	M	Brazil			
34	M	USA			
35	M	Brazil			
36	F	USA			
37	M	USA			
38	F	USA			
39	M	India			
40	M	USA			
41	M	USA			
42	M	USA			
43	M	USA			
44	M	USA			
45	F	USA			
46	F	USA			

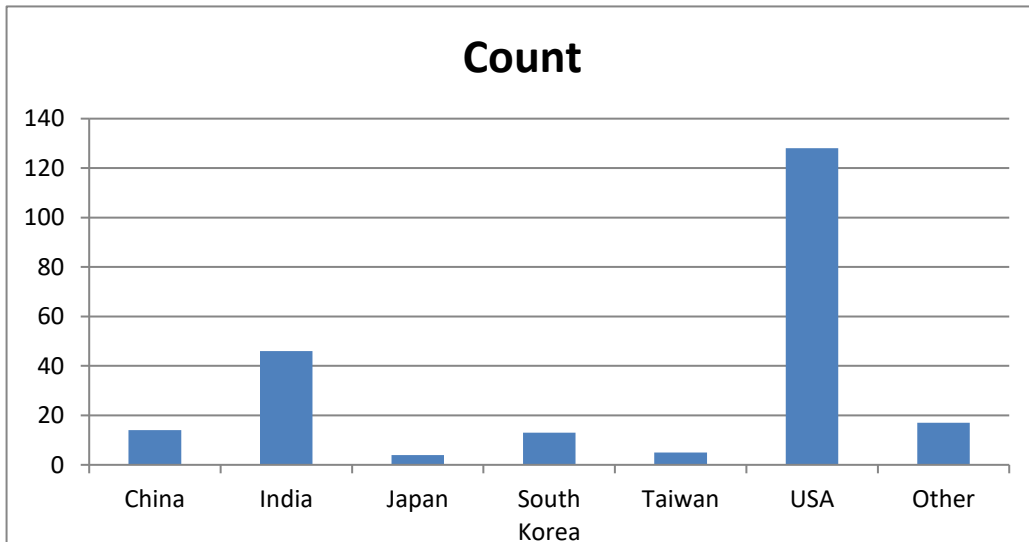
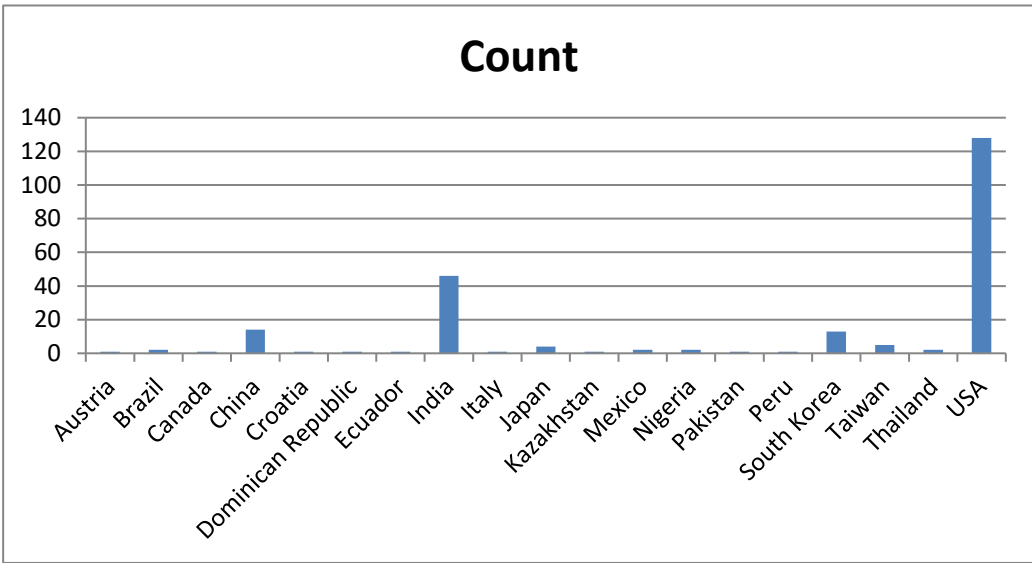
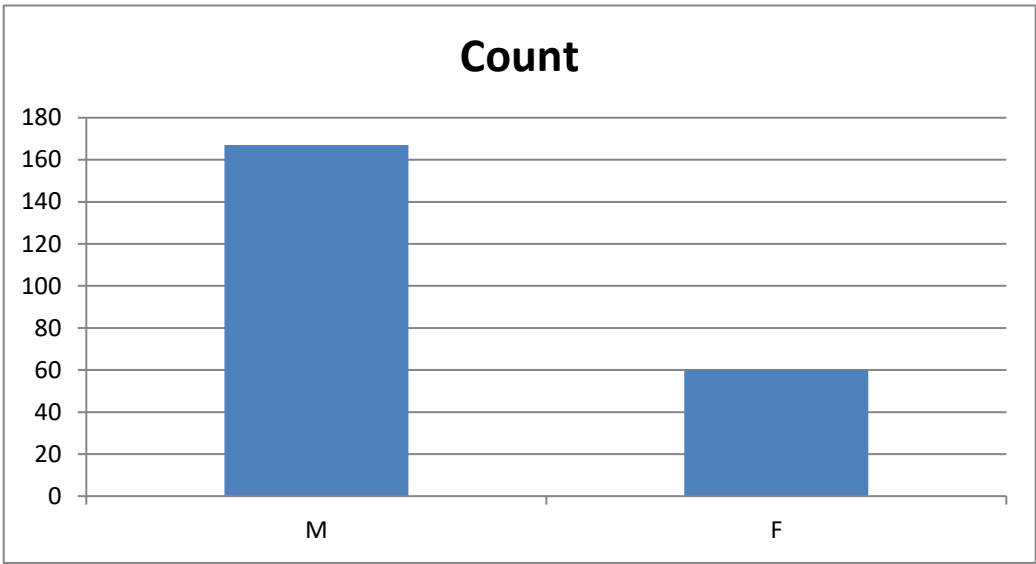
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60	M	Italy
61	M	Austria
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66	M	India
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68	F	India
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70	M	USA
71	M	USA
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73	M	USA
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75	F	USA
76	M	India
77	M	USA
78	M	China
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86	M	India
87	F	USA
88	M	South Korea
89	M	USA
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91	M	Japan
92	F	USA
93	M	India

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121	M	USA
122	M	USA
123	F	USA
124	F	USA
125	M	USA
126	M	India
127	M	Kazakhstan
128	M	India
129	M	USA
130	M	USA
131	M	USA
132	M	USA
133	M	USA
134	M	USA
135	F	Taiwan
136	F	India
137	M	USA
138	M	South Korea
139	M	India
140	M	USA

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142	M	USA
143	M	India
144	M	USA
145	M	Dominican Republic
146	F	India
147	M	USA
148	F	India
149	M	Pakistan
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161	M	USA
162	M	USA
163	M	Ecuador
164	F	Japan
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177	M	USA
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179	M	India
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187	M	India

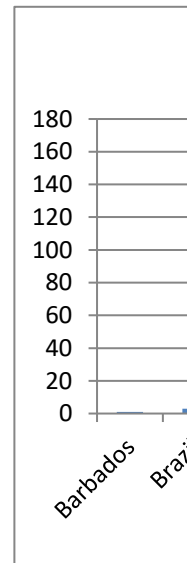
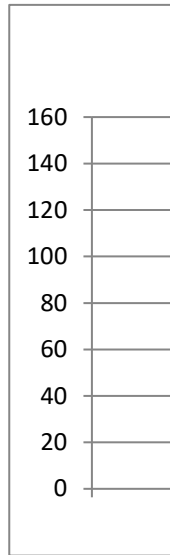
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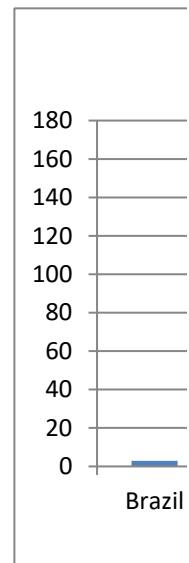


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Student	Gender	Nationality	Gender	Count	Pct of total
1	M	USA	M	150	66.4%
2	M	India	F	76	33.6%
3	M	USA			
4	F	USA	<b>Nationality</b>	<b>Count</b>	<b>Pct of total</b>
5	M	USA	Barbados	1	0.4%
6	F	USA	Brazil	3	1.3%
7	F	USA	China	10	4.4%
8	M	USA	Colombia	1	0.4%
9	M	USA	India	29	12.8%
10	M	USA	Japan	3	1.3%
11	M	Brazil	Mexico	2	0.9%
12	M	India	Peru	2	0.9%
13	M	India	Philippines	1	0.4%
14	F	USA	Puerto Rico	1	0.4%
15	M	India	South Korea	12	5.3%
16	M	USA	Taiwan	5	2.2%
17	M	USA	Thailand	1	0.4%
18	M	USA	USA	155	68.6%
19	F	USA			
20	M	USA	<b>Nationality</b>	<b>Count</b>	<b>Pct of total</b>
21	M	USA	Brazil	3	1.3%
22	F	USA	China	10	4.4%
23	M	USA	India	29	12.8%
24	M	USA	Japan	3	1.3%
25	M	India	South Korea	12	5.3%
26	M	USA	Taiwan	5	2.2%
27	M	USA	USA	155	68.6%
28	F	China	Other	9	4.0%
29	M	USA			
30	M	USA			
31	M	China			
32	F	Taiwan			
33	M	USA			
34	M	South Korea			
35	F	USA			
36	M	South Korea			
37	F	USA			
38	M	USA			
39	M	USA			
40	M	USA			
41	M	USA			
42	F	India			
43	M	USA			
44	M	USA			
45	M	USA			
46	F	USA			



Probably the two most notable differences are that (1) there is a higher percentage of females in 2009 than in 2008, and (2) there is a higher percentage of USA students in 2009 than in 2008 (and a corresponding decrease in the percentage of Asian students).



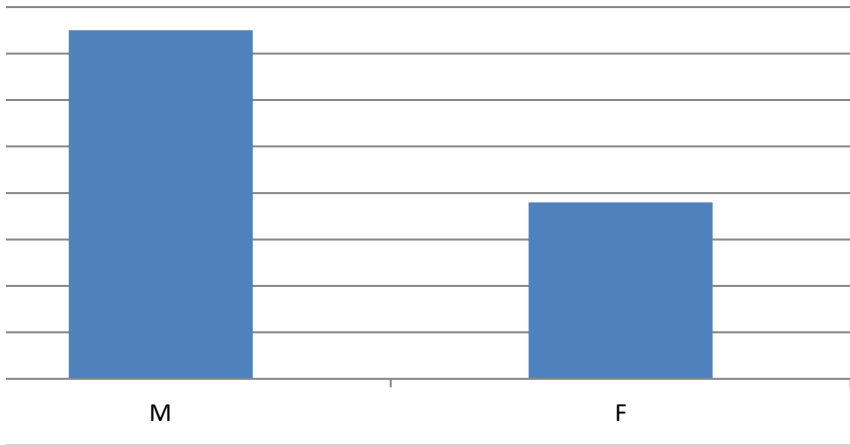
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87	F	Taiwan
88	M	USA
89	M	Barbados
90	M	USA
91	M	India
92	F	USA
93	M	USA

94	M	South Korea
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122	F	Taiwan
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130	F	Puerto Rico
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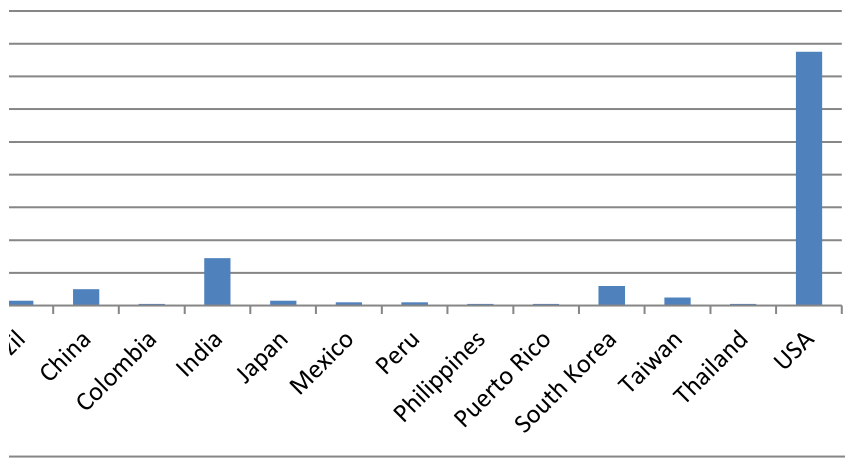
141	F	India
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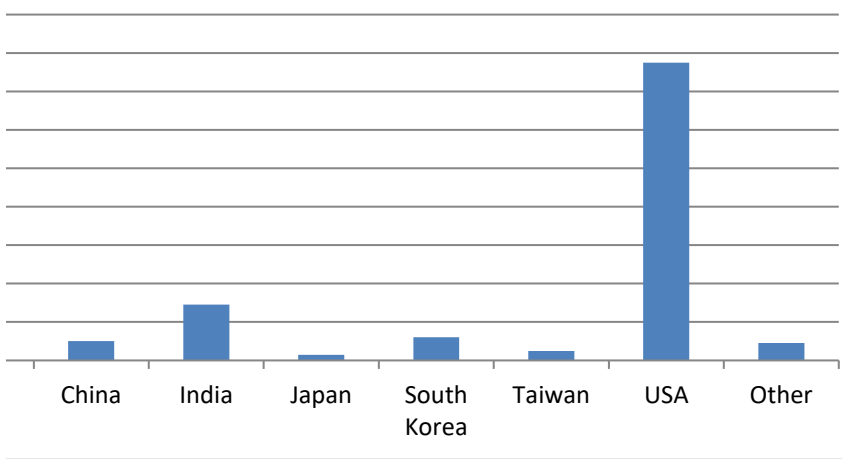
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## The Numbers

I wrote some macros to manipulate the data into the form shown here.

Index	Movie	Distributor
1	<a href="#">The Texas Chainsaw Massacre: The Beginning</a>	New Line
2	<a href="#">Year of the Dog</a>	Paramount Vantage
3	<a href="#">War</a>	Lionsgate
4	<a href="#">Stomp the Yard</a>	Sony Pictures
5	<a href="#">The Illusionist</a>	Freestyle Releasing
6	<a href="#">Pirates of the Caribbean: At World's End</a>	Buena Vista
7	<a href="#">Sicko</a>	Weinstein Co.
8	<a href="#">Babel</a>	Paramount Vantage
9	<a href="#">Ghost Rider</a>	Sony Pictures
10	<a href="#">Saw III</a>	Lionsgate
11	<a href="#">World Trade Center</a>	Paramount Pictures
12	<a href="#">Beerfest</a>	Paramount Pictures
13	<a href="#">Ocean's Thirteen</a>	Warner Bros.
14	<a href="#">Amazing Grace</a>	Warner Bros.
15	<a href="#">Shrek the Third</a>	Warner Bros.
16	<a href="#">The Holiday</a>	Warner Bros.
17	<a href="#">Deck the Halls</a>	Warner Bros.
18	<a href="#">The Namesake</a>	Fox Searchlight
19	<a href="#">Déjà Vu</a>	Buena Vista
20	<a href="#">Running With Scissors</a>	Sony Pictures
21	<a href="#">Ratatouille</a>	Buena Vista
22	<a href="#">The Hills Have Eyes II</a>	Fox Searchlight
23	<a href="#">Fast Food Nation</a>	Fox Searchlight
24	<a href="#">Nancy Drew</a>	Warner Bros.
25	<a href="#">28 Weeks Later</a>	20th Century Fox
26	<a href="#">The Condemned</a>	Lionsgate
27	<a href="#">Employee of the Month</a>	Lionsgate
28	<a href="#">Man of the Year</a>	Universal
29	<a href="#">The Bourne Ultimatum</a>	Universal
30	<a href="#">All the King's Men</a>	Sony Pictures
31	<a href="#">Turistas</a>	20th Century Fox
32	<a href="#">I Now Pronounce You Chuck and Larry</a>	Universal
33	<a href="#">Fantastic Four: Rise of the Silver Surfer</a>	20th Century Fox
34	<a href="#">The Nativity Story</a>	New Line
35	<a href="#">Thank You For Smoking</a>	Fox Searchlight
36	<a href="#">Casino Royale</a>	MGM
37	<a href="#">Miami Vice</a>	Universal
38	<a href="#">The Transformers</a>	Paramount Pictures
39	<a href="#">Unaccompanied Minors</a>	Warner Bros.
40	<a href="#">Hannibal Rising</a>	Weinstein Co.
41	<a href="#">Pride</a>	Lionsgate
42	<a href="#">The Ant Bully</a>	Warner Bros.
43	<a href="#">Surf's Up</a>	Sony Pictures
44	<a href="#">Material Girls</a>	MGM
45	<a href="#">Daddy Day Camp</a>	Sony Pictures
46	<a href="#">Pulse</a>	Weinstein/Dimension

I did the recoding manually, by sorting on Distributor, say, and finding values with count greater than 20.

See the tables of counts and charts to the right.

47	<a href="#">Vacancy</a>	Sony/Screen Gems
48	<a href="#">TMNT</a>	Weinstein Co.
49	<a href="#">Invincible</a>	Buena Vista
50	<a href="#">Flyboys</a>	MGM
51	<a href="#">Mr. Brooks</a>	MGM
52	<a href="#">Sunshine</a>	Fox Searchlight
53	<a href="#">The Fountain</a>	Warner Bros.
54	<a href="#">Clerks II</a>	MGM
55	<a href="#">Pan's Labyrinth</a>	PictureHouse
56	<a href="#">John Tucker Must Die</a>	20th Century Fox
57	<a href="#">Little Man</a>	Sony Pictures
58	<a href="#">Hot Fuzz</a>	Focus Features
59	<a href="#">Norbit</a>	Paramount Pictures
60	<a href="#">Superbad</a>	Sony Pictures
61	<a href="#">Spider-Man 3</a>	Sony Pictures
62	<a href="#">Next</a>	Sony Pictures
63	<a href="#">Superman Returns</a>	Warner Bros.
64	<a href="#">X-Men: The Last Stand</a>	20th Century Fox
65	<a href="#">The Queen</a>	Miramax
66	<a href="#">The Descent</a>	Lionsgate
67	<a href="#">Perfect Stranger</a>	Sony Pictures
68	<a href="#">Freedom Writers</a>	Paramount Pictures
69	<a href="#">The Ex</a>	Weinstein Co.
70	<a href="#">Are We Done Yet?</a>	Sony Pictures
71	<a href="#">Waitress</a>	Fox Searchlight
72	<a href="#">Georgia Rule</a>	Universal
73	<a href="#">Iraq in Fragments</a>	Typecast Releasing
74	<a href="#">Lady in the Water</a>	Warner Bros.
75	<a href="#">Once</a>	Fox Searchlight
76	<a href="#">Disturbia</a>	Paramount Pictures
77	<a href="#">Balls of Fury</a>	Focus Features
78	<a href="#">Idiocracy</a>	20th Century Fox
79	<a href="#">Hot Rod</a>	Paramount Pictures
80	<a href="#">Ice Age: The Meltdown</a>	20th Century Fox
81	<a href="#">The Covenant</a>	Sony/Screen Gems
82	<a href="#">Barnyard: The Original Party Animals</a>	Paramount Pictures
83	<a href="#">Day Watch</a>	Fox Searchlight
84	<a href="#">How to Eat Fried Worms</a>	New Line
85	<a href="#">Everyone's Hero</a>	20th Century Fox
86	<a href="#">The Marine</a>	20th Century Fox
87	<a href="#">School for Scoundrels</a>	Weinstein Co.
88	<a href="#">Black Christmas</a>	Miramax/Dimension
89	<a href="#">The Devil Wears Prada</a>	20th Century Fox
90	<a href="#">The Nanny Diaries</a>	Weinstein Co.
91	<a href="#">Blood Diamond</a>	Warner Bros.
92	<a href="#">Reign Over Me</a>	Sony Pictures
93	<a href="#">The Black Dahlia</a>	Universal

94	<a href="#">Reno 911!: Miami</a>	20th Century Fox
95	<a href="#">Live Free or Die Hard</a>	20th Century Fox
96	<a href="#">Trust the Man</a>	Fox Searchlight
97	<a href="#">The Wicker Man</a>	Warner Bros.
98	<a href="#">The Astronaut Farmer</a>	Warner Bros.
99	<a href="#">Tenacious D in: The Pick of Destiny</a>	New Line
100	<a href="#">Pirates of the Caribbean: Dead Man's Chest</a>	Buena Vista
101	<a href="#">Smokin' Aces</a>	Universal
102	<a href="#">License to Wed</a>	Warner Bros.
103	<a href="#">Grindhouse</a>	Weinstein/Dimension
104	<a href="#">Pathfinder</a>	20th Century Fox
105	<a href="#">The Simpsons Movie</a>	20th Century Fox
106	<a href="#">Operation Homecoming</a>	The Documentary Group
107	<a href="#">The Omen</a>	20th Century Fox
108	<a href="#">Catch and Release</a>	Sony Pictures
109	<a href="#">Away From Her</a>	Lionsgate
110	<a href="#">Knocked Up</a>	Universal
111	<a href="#">Jet Li's Fearless</a>	Focus/Rogue Pictures
112	<a href="#">The Guardian</a>	Buena Vista
113	<a href="#">Water</a>	Fox Searchlight
114	<a href="#">Accepted</a>	Universal
115	<a href="#">Music and Lyrics</a>	Warner Bros.
116	<a href="#">You, Me and Dupree</a>	Universal
117	<a href="#">Eragon</a>	20th Century Fox
118	<a href="#">Primeval</a>	Buena Vista
119	<a href="#">Night at the Museum</a>	20th Century Fox
120	<a href="#">Evan Almighty</a>	Universal
121	<a href="#">Black Snake Moan</a>	Paramount Vantage
122	<a href="#">No Reservations</a>	Warner Bros.
123	<a href="#">Meet the Robinsons</a>	Buena Vista
124	<a href="#">A Good Year</a>	20th Century Fox
125	<a href="#">One Night with the King</a>	Rocky Mountain Pictures
126	<a href="#">Hostel: Part II</a>	Lionsgate
127	<a href="#">Stranger Than Fiction</a>	Sony Pictures
128	<a href="#">We Are... Marshall</a>	Warner Bros.
129	<a href="#">Rush Hour 3</a>	New Line
130	<a href="#">Flicka</a>	20th Century Fox
131	<a href="#">Dreamgirls</a>	Paramount Pictures
132	<a href="#">Children of Men</a>	Universal
133	<a href="#">Bobby</a>	Weinstein Co.
134	<a href="#">Underdog</a>	Buena Vista
135	<a href="#">Flushed Away</a>	Dreamworks SKG
136	<a href="#">Jackass: Number Two</a>	Paramount Pictures
137	<a href="#">Confetti</a>	Fox Searchlight
138	<a href="#">The Invisible</a>	Buena Vista
139	<a href="#">Borat</a>	20th Century Fox
140	<a href="#">Wild Hogs</a>	Buena Vista

141	<a href="#">The Grudge 2</a>	Sony Pictures
142	<a href="#">Evening</a>	Focus Features
143	<a href="#">The Invasion</a>	Warner Bros.
144	<a href="#">The Good Shepherd</a>	Universal
145	<a href="#">La Vie en Rose</a>	PictureHouse
146	<a href="#">Fracture</a>	New Line
147	<a href="#">Monster House</a>	Sony Pictures
148	<a href="#">Zoom</a>	Sony Pictures
149	<a href="#">Lucky You</a>	Warner Bros.
150	<a href="#">1408</a>	Miramax/Dimension
151	<a href="#">Bridge to Terabithia</a>	Buena Vista
152	<a href="#">Apocalypto</a>	Buena Vista
153	<a href="#">Bratz</a>	Lionsgate
154	<a href="#">My Super Ex-Girlfriend</a>	20th Century Fox
155	<a href="#">Bug</a>	Lionsgate
156	<a href="#">The Prestige</a>	Buena Vista
157	<a href="#">Stardust</a>	Paramount Pictures
158	<a href="#">Happy Feet</a>	Warner Bros.
159	<a href="#">Alpha Dog</a>	Universal
160	<a href="#">Epic Movie</a>	20th Century Fox
161	<a href="#">Blades of Glory</a>	Paramount Pictures
162	<a href="#">Dead Silence</a>	Universal
163	<a href="#">Delta Farce</a>	Lionsgate
164	<a href="#">The Messengers</a>	Sony Pictures
165	<a href="#">I Know Who Killed Me</a>	Sony/TriStar
166	<a href="#">Who's Your Caddy?</a>	MGM
167	<a href="#">Notes on a Scandal</a>	Fox Searchlight
168	<a href="#">I Think I Love My Wife</a>	Fox Searchlight
169	<a href="#">Charlotte's Web</a>	Paramount Pictures
170	<a href="#">The Last Kiss</a>	Paramount Pictures
171	<a href="#">Because I Said So</a>	Universal
172	<a href="#">Unconscious</a>	Regent Releasing
173	<a href="#">Shooter</a>	Paramount Pictures
174	<a href="#">Gridiron Gang</a>	Sony Pictures
175	<a href="#">Hairspray</a>	New Line
176	<a href="#">Zodiac</a>	Paramount Pictures
177	<a href="#">In the Land of Women</a>	Warner Independent Pictures
178	<a href="#">Premonition</a>	Sony Pictures
179	<a href="#">Becoming Jane</a>	Miramax
180	<a href="#">The Protector</a>	Weinstein Co.
181	<a href="#">Crank</a>	Lionsgate
182	<a href="#">The Hitcher</a>	Focus Features
183	<a href="#">The History Boys</a>	Fox Searchlight
184	<a href="#">Gracie</a>	PictureHouse
185	<a href="#">Firehouse Dog</a>	20th Century Fox
186	<a href="#">The Santa Clause 3: The Escape Clause</a>	Buena Vista
187	<a href="#">Step Up</a>	Buena Vista

188	<a href="#">Open Season</a>	Sony Pictures
189	<a href="#">The Last Mimzy</a>	New Line
190	<a href="#">The Reaping</a>	Warner Bros.
191	<a href="#">Talladega Nights: The Ballad of Ricky Bobby</a>	Sony Pictures
192	<a href="#">Hollywoodland</a>	Focus Features
193	<a href="#">Rocky Balboa</a>	MGM
194	<a href="#">A Mighty Heart</a>	Paramount Vantage
195	<a href="#">Mr. Bean's Holiday</a>	Universal
196	<a href="#">Joshua</a>	Fox Searchlight
197	<a href="#">Flags of Our Fathers</a>	Dreamworks SKG
198	<a href="#">Little Miss Sunshine</a>	Fox Searchlight
199	<a href="#">Garfield's A Tail of Two Kitties</a>	20th Century Fox
200	<a href="#">Letters from Iwo Jima</a>	Dreamworks SKG
201	<a href="#">Daddy's Little Girls</a>	Lionsgate
202	<a href="#">Harry Potter and the Order of the Phoenix</a>	Warner Bros.
203	<a href="#">Marie-Antoinette</a>	Sony Pictures
204	<a href="#">The Departed</a>	Warner Bros.
205	<a href="#">Snakes on a Plane</a>	New Line
206	<a href="#">Breach</a>	Universal
207	<a href="#">The Last King of Scotland</a>	Fox Searchlight
208	<a href="#">300</a>	Warner Bros.
209	<a href="#">The Pursuit of Happyness</a>	Sony Pictures
210	<a href="#">The Number 23</a>	New Line
211	<a href="#">Arctic Tale</a>	Paramount Vantage

<b>Recoded Distributor</b>	<b>Genre</b>	<b>Recoded Genre</b>	<b>7-day Gross</b>	<b>14-day Gross</b>
New Line	Horror	Horror	\$22,707,121	\$32,109,139
Other	Drama	Drama	\$141,803	\$318,598
Lionsgate	Action	Action	\$12,839,402	
Sony Pictures	Drama	Drama	\$28,263,594	\$42,853,277
Other	Drama	Drama		
Buena Vista	Adventure	Adventure	\$173,339,068	\$232,297,818
Other	Documentary	Other		
Other	Drama	Drama		
Sony Pictures	Action	Action	\$58,960,097	\$83,257,376
Lionsgate	Horror	Horror	\$44,576,835	\$63,279,443
Sony Pictures	Drama	Drama		
Other	Comedy	Comedy	\$10,151,951	\$15,786,241
Other	Adventure	Adventure	\$50,705,336	\$79,668,309
Other	Drama	Drama	\$5,200,372	
Other	Adventure	Adventure	\$150,338,458	\$227,906,792
Other	Romantic Comedy	Other	\$17,110,339	\$30,092,962
Other	Comedy	Comedy		
Fox Searchlight	Drama	Drama	\$361,518	\$1,333,480
Buena Vista	Thriller/Suspense	Thriller/Suspense		
Sony Pictures	Comedy	Comedy		\$3,660,628
Buena Vista	Comedy	Comedy	\$80,517,305	\$124,984,886
Fox Searchlight	Horror	Horror	\$11,883,609	\$17,579,582
Fox Searchlight	Drama	Drama	\$580,363	\$853,713
Warner Bros.	Thriller/Suspense	Thriller/Suspense	\$11,687,594	\$19,334,739
20th Century Fox	Horror	Horror	\$13,460,756	\$21,121,250
Lionsgate	Action	Action	\$4,947,445	\$6,769,217
Lionsgate	Comedy	Comedy	\$14,310,416	\$21,038,727
Universal	Comedy	Comedy	\$15,480,880	\$24,146,540
Universal	Action	Action	\$98,673,300	\$144,820,320
Sony Pictures	Drama	Drama	\$4,686,955	
20th Century Fox	Thriller/Suspense	Thriller/Suspense	\$4,540,030	\$6,437,413
Universal	Comedy	Comedy	\$52,547,115	\$81,169,105
20th Century Fox	Action	Action	\$77,453,559	\$105,800,808
New Line	Drama	Drama	\$10,239,000	\$18,373,000
Fox Searchlight	Black Comedy	Other		
Other	Action	Action	\$63,267,784	\$100,763,154
Universal	Action	Action	\$36,056,785	\$50,564,950
Paramount Pictures	Action	Action		\$228,950,080
Warner Bros.	Comedy	Comedy	\$6,547,915	
Other	Thriller/Suspense	Thriller/Suspense	\$16,662,340	\$24,157,310
Lionsgate	Drama	Drama	\$4,295,317	
Warner Bros.	Adventure	Adventure	\$14,260,551	\$20,610,757
Sony Pictures	Adventure	Adventure	\$25,370,697	\$40,612,980
Other	Comedy	Comedy	\$6,190,228	
Sony Pictures	Comedy	Comedy		
Other	Horror	Horror	\$11,176,099	\$16,228,598

Other	Thriller/Suspense	Thriller/Suspense	\$9,667,558	\$14,985,909
Other	Action	Action	\$29,268,284	\$41,781,886
Buena Vista	Drama	Drama	\$22,640,843	\$39,870,508
Other	Drama	Drama	\$7,595,128	\$10,794,574
Other	Thriller/Suspense	Thriller/Suspense	\$13,682,301	\$20,621,219
Fox Searchlight	Thriller/Suspense	Thriller/Suspense	\$362,501	\$2,235,239
Warner Bros.	Drama	Drama		
Other	Comedy	Comedy		\$20,987,916
Other	Horror	Horror		
20th Century Fox	Comedy	Comedy	\$22,572,760	\$32,751,462
Sony Pictures	Comedy	Comedy		
Other	Comedy	Comedy	\$7,724,188	\$14,090,753
Paramount Pictures	Comedy	Comedy	\$42,082,178	\$64,938,373
Sony Pictures	Comedy	Comedy	\$50,572,274	\$76,834,795
Sony Pictures	Adventure	Adventure	\$182,070,572	\$253,357,629
Sony Pictures	Action	Action	\$9,066,641	\$13,000,019
Warner Bros.	Adventure	Adventure		
20th Century Fox	Action	Action		
Other	Drama	Drama		
Lionsgate	Thriller/Suspense	Thriller/Suspense	\$12,927,112	\$19,882,850
Sony Pictures	Thriller/Suspense	Thriller/Suspense	\$13,968,118	\$19,418,295
Paramount Pictures	Drama	Drama	\$11,323,827	\$21,317,621
Other	Romantic Comedy	Other	\$1,944,838	
Sony Pictures	Comedy	Comedy		
Fox Searchlight	Drama	Drama		
Universal	Drama	Drama	\$9,121,575	\$14,424,970
Other	Documentary	Other		
Warner Bros.	Drama	Drama		\$35,922,083
Fox Searchlight	Drama	Drama		
Paramount Pictures	Thriller/Suspense	Thriller/Suspense	\$27,194,364	\$43,085,763
Other	Comedy	Comedy		
20th Century Fox	Comedy	Comedy	\$234,596	\$351,327
Paramount Pictures	Comedy	Comedy	\$8,792,476	\$12,534,240
20th Century Fox	Adventure	Adventure		
Other	Thriller/Suspense	Thriller/Suspense	\$11,013,531	\$17,004,815
Paramount Pictures	Comedy	Comedy	\$24,016,098	\$38,506,651
Fox Searchlight	Action	Action	\$68,234	\$166,581
New Line	Drama	Drama	\$5,571,313	
20th Century Fox	Adventure	Adventure	\$6,844,371	\$12,125,203
20th Century Fox	Action	Action	\$8,822,674	\$13,555,127
Other	Comedy	Comedy	\$10,554,778	\$15,065,677
Other	Horror	Horror		
20th Century Fox	Comedy	Comedy		
Other	Comedy	Comedy	\$10,151,376	
Warner Bros.	Action	Action	\$12,119,786	\$22,002,750
Sony Pictures	Drama	Drama	\$9,630,847	\$14,896,332
Universal	Thriller/Suspense	Thriller/Suspense	\$12,820,690	\$18,613,540



20th Century Fox	Comedy	Comedy	\$12,662,896	\$17,729,833
20th Century Fox	Action	Action		\$88,674,537
Fox Searchlight	Comedy	Comedy	\$255,827	\$655,122
Warner Bros.	Thriller/Suspense	Thriller/Suspense	\$13,371,125	\$18,628,666
Warner Bros.	Drama	Drama	\$5,580,399	\$8,338,517
New Line	Comedy	Comedy		
Buena Vista	Adventure	Adventure		
Universal	Comedy	Comedy	\$18,630,955	\$27,061,120
Warner Bros.	Comedy	Comedy		\$31,442,050
Other	Horror	Horror	\$15,460,828	\$21,320,000
20th Century Fox	Adventure	Adventure	\$6,360,568	\$8,895,535
20th Century Fox	Comedy	Comedy	\$102,949,705	\$141,112,342
Other	Documentary	Other	\$6,795	
20th Century Fox	Horror	Horror		
Sony Pictures	Romantic Comedy	Other	\$9,311,010	\$12,646,624
Lionsgate	Drama	Drama		
Universal	Romantic Comedy	Other	\$46,223,940	\$75,946,815
Other	Drama	Drama	\$13,083,004	\$19,461,440
Buena Vista	Action	Action	\$22,751,717	\$35,265,924
Fox Searchlight	Drama	Drama		
Universal	Comedy	Comedy	\$14,641,880	\$23,510,200
Warner Bros.	Romantic Comedy	Other		
Universal	Comedy	Comedy		
20th Century Fox	Adventure	Adventure	\$30,495,702	\$48,213,849
Buena Vista	Adventure	Adventure	\$7,716,473	
20th Century Fox	Comedy	Comedy	\$79,055,249	\$140,096,754
Universal	Comedy	Comedy	\$45,535,600	\$69,987,650
Other	Drama	Drama	\$5,410,053	\$8,079,470
Warner Bros.	Romantic Comedy	Other	\$17,586,828	\$28,169,989
Buena Vista	Adventure	Adventure	\$35,231,834	\$59,900,752
20th Century Fox	Drama	Drama	\$4,799,687	\$6,851,054
Other	Drama	Drama	\$5,307,651	
Lionsgate	Horror	Horror	\$11,191,000	\$16,040,871
Sony Pictures	Comedy	Comedy	\$16,300,147	\$26,778,068
Warner Bros.	Drama	Drama	\$17,038,381	\$30,289,979
New Line	Action	Action	\$66,323,168	\$96,763,003
20th Century Fox	Drama	Drama	\$9,163,221	\$14,900,036
Paramount Pictures	Musical	Other		\$22,964,345
Universal	Adventure	Adventure		
Other	Drama	Drama	\$1,242,622	\$7,204,245
Buena Vista	Adventure	Adventure	\$18,290,912	\$28,078,697
Other	Comedy	Comedy	\$23,220,769	\$41,991,571
Paramount Pictures	Comedy	Comedy	\$37,465,379	\$56,293,371
Fox Searchlight	Romantic Comedy	Other	\$29,623	\$190,312
Buena Vista	Thriller/Suspense	Thriller/Suspense	\$9,221,338	\$13,343,836
20th Century Fox	Comedy	Comedy	\$38,841,865	\$76,154,492
Buena Vista	Comedy	Comedy	\$49,415,325	\$85,167,997

Sony Pictures	Horror	Horror	\$23,680,202	\$32,715,981
Other	Drama	Drama		\$9,668,000
Warner Bros.	Thriller/Suspense	Thriller/Suspense	\$8,374,693	\$12,611,955
Universal	Drama	Drama	\$24,065,985	\$41,897,680
Other	Drama	Drama		\$3,144,035
New Line	Thriller/Suspense	Thriller/Suspense	\$14,260,545	\$23,032,218
Sony Pictures	Adventure	Adventure		\$50,951,765
Sony Pictures	Adventure	Adventure	\$6,607,544	
Warner Bros.	Drama	Drama	\$3,622,974	\$5,329,749
Other	Horror	Horror	\$29,779,254	\$46,649,346
Buena Vista	Drama	Drama	\$32,648,034	\$49,302,632
Buena Vista	Adventure	Adventure	\$20,201,406	\$31,724,156
Lionsgate	Comedy	Comedy	\$6,146,369	
20th Century Fox	Comedy	Comedy		\$19,118,663
Lionsgate	Drama	Drama	\$4,871,655	\$6,740,839
Buena Vista	Thriller/Suspense	Thriller/Suspense	\$19,207,527	\$31,630,273
Paramount Pictures	Adventure	Adventure	\$13,842,551	\$22,501,872
Warner Bros.	Musical	Other	\$62,178,720	\$103,955,600
Universal	Drama	Drama	\$8,796,815	
20th Century Fox	Comedy	Comedy	\$21,143,563	\$31,024,169
Paramount Pictures	Comedy	Comedy	\$45,382,907	\$76,130,018
Universal	Horror	Horror	\$9,775,725	\$14,145,450
Lionsgate	Comedy	Comedy	\$4,285,912	\$6,692,207
Sony Pictures	Horror	Horror	\$17,524,018	\$26,708,505
Other	Thriller/Suspense	Thriller/Suspense	\$5,066,322	
Other	Comedy	Comedy	\$3,711,337	
Fox Searchlight	Drama	Drama		
Fox Searchlight	Comedy	Comedy	\$7,279,181	\$10,899,186
Paramount Pictures	Drama	Drama	\$18,809,466	\$40,857,817
Paramount Pictures	Romantic Comedy	Other	\$5,936,292	\$9,188,774
Universal	Comedy	Comedy	\$16,584,590	\$28,257,665
Other	Comedy	Comedy		
Paramount Pictures	Thriller/Suspense	Thriller/Suspense	\$19,211,919	\$30,855,582
Sony Pictures	Drama	Drama	\$17,501,040	\$28,676,742
New Line	Musical	Other	\$43,858,000	\$69,629,420
Paramount Pictures	Thriller/Suspense	Thriller/Suspense	\$16,954,103	\$25,849,997
Other	Comedy	Comedy	\$5,908,658	\$9,308,837
Sony Pictures	Thriller/Suspense	Thriller/Suspense	\$22,090,745	\$34,242,317
Other	Drama	Drama		\$6,148,661
Other	Action	Action	\$6,583,847	\$9,940,816
Lionsgate	Action	Action	\$15,058,504	\$21,713,622
Other	Thriller/Suspense	Thriller/Suspense	\$9,800,045	
Fox Searchlight	Comedy	Comedy		
Other	Drama	Drama	\$1,939,458	
20th Century Fox	Comedy	Comedy		
Buena Vista	Comedy	Comedy	\$24,159,405	\$43,401,458
Buena Vista	Drama	Drama	\$29,580,830	\$44,232,438

Sony Pictures	Adventure	Adventure	\$28,128,740	\$48,154,270
New Line	Adventure	Adventure	\$12,192,019	\$17,318,613
Warner Bros.	Horror	Horror		
Sony Pictures	Comedy	Comedy	\$68,216,958	\$100,585,876
Other	Drama	Drama	\$7,799,599	\$11,434,376
Other	Drama	Drama		
Other	Drama	Drama	\$5,418,140	\$7,757,609
Universal	Comedy	Comedy	\$13,000,430	
Fox Searchlight	Thriller/Suspense	Thriller/Suspense	\$74,590	\$400,745
Other	Drama	Drama	\$13,576,213	\$22,131,112
Fox Searchlight	Comedy	Comedy		
20th Century Fox	Comedy	Comedy		
Other	Drama	Drama		
Lionsgate	Romantic Comedy	Other		
Warner Bros.	Adventure	Adventure		\$217,083,411
Sony Pictures	Drama	Drama	\$6,906,276	\$10,733,964
Warner Bros.	Drama	Drama	\$37,950,891	\$63,472,929
New Line	Thriller/Suspense	Thriller/Suspense	\$20,152,024	\$28,601,000
Universal	Thriller/Suspense	Thriller/Suspense	\$14,309,725	\$21,938,345
Fox Searchlight	Drama	Drama		
Warner Bros.	Action	Action	\$96,288,328	\$141,843,655
Sony Pictures	Drama	Drama	\$38,286,895	\$79,049,229
New Line	Thriller/Suspense	Thriller/Suspense	\$17,633,643	\$26,321,000
Other	Documentary	Other		

<b>Total US Gross</b>	<b>International Gross</b>	<b>US DVD Sales</b>	<b>Budget</b>
\$39,517,763	\$11,000,000	\$15,909,367	\$16,000,000
\$1,540,141			
\$22,466,994	\$18,200,000	\$27,040,983	\$25,000,000
\$61,356,221	\$15,000,000	\$33,166,898	\$14,000,000
\$39,868,642	\$44,407,533	\$38,189,217	\$16,500,000
\$309,420,425	\$651,576,067	\$295,701,718	\$300,000,000
\$24,538,513	\$9,000,000	\$17,375,592	\$9,000,000
\$34,302,837	\$101,000,000	\$31,456,221	\$20,000,000
\$115,802,596	\$121,900,000	\$103,699,106	\$120,000,000
\$80,238,724	\$83,638,091	\$47,124,617	\$10,000,000
\$70,278,893	\$93,000,000	\$36,856,697	\$65,000,000
\$19,185,184	\$974,132	\$28,372,842	
\$117,144,465	\$194,600,000	\$47,716,836	\$85,000,000
\$21,214,987	\$6,771,432	\$25,275,167	
\$322,719,944	\$476,238,218	\$174,342,569	\$160,000,000
\$63,280,000	\$141,910,324	\$71,202,459	\$85,000,000
\$35,093,569	\$12,137,501	\$28,291,848	
\$13,610,521	\$6,569,588	\$9,345,626	
\$64,038,616	\$117,000,000	\$40,473,916	\$80,000,000
\$6,775,659	\$437,970	\$1,877,732	\$12,000,000
\$206,445,654	\$418,000,000	\$189,036,784	\$150,000,000
\$20,804,166	\$16,662,372	\$30,466,195	\$15,000,000
\$1,005,539			
\$25,584,685	\$5,000,000	\$10,392,745	
\$28,638,916	\$35,599,524	\$24,333,111	
\$7,371,706			
\$28,444,855	\$9,672,863	\$21,061,839	\$10,000,000
\$37,442,180			
\$227,471,070	\$214,690,492	\$123,288,965	\$130,000,000
\$7,221,458	\$2,300,000		\$55,000,000
\$7,027,762	\$7,293,308	\$3,507,046	\$10,000,000
\$119,725,280	\$65,983,182	\$69,258,990	\$85,000,000
\$131,921,738	\$156,293,581	\$62,251,422	\$120,000,000
\$37,629,831	\$8,802,433	\$26,111,634	\$35,000,000
\$24,793,509	\$14,438,702	\$16,644,189	\$7,500,000
\$167,365,000	\$429,000,000	\$79,665,820	\$102,000,000
\$63,478,838	\$100,339,718	\$37,640,111	\$135,000,000
\$319,246,193	\$389,026,399	\$290,541,120	\$151,000,000
\$16,655,224	\$5,293,990	\$7,035,302	\$25,000,000
\$27,669,725	\$52,913,586	\$23,317,001	\$50,000,000
\$7,057,600			
\$28,142,535	\$27,038,594	\$28,487,251	\$45,000,000
\$58,867,694	\$86,528,051	\$46,067,803	\$100,000,000
\$11,449,638	\$1,000,000	\$12,117,535	
\$13,235,267	\$4,962,131	\$5,394,066	\$76,000,000
\$20,264,436	\$9,507,049		\$7,500,000

\$19,063,007	\$5,300,000	\$15,476,934	
\$54,149,098	\$40,860,790	\$30,361,634	\$35,000,000
\$57,806,952	\$673,876	\$48,056,452	
\$13,090,630	\$1,725,749	\$23,600,109	\$60,000,000
\$28,476,219	\$17,512,793	\$29,822,828	
\$3,688,560	\$28,342,050	\$6,319,960	\$40,000,000
\$10,144,010	\$5,317,628	\$8,742,316	\$35,000,000
\$24,148,068	\$1,746,405	\$26,390,836	\$5,000,000
\$37,634,615	\$45,600,000	\$40,752,599	\$16,000,000
\$41,011,711	\$27,812,815	\$32,656,099	
\$58,636,047	\$43,000,000	\$32,683,684	\$64,000,000
\$23,618,786	\$55,578,707	\$33,365,115	\$16,000,000
\$95,673,607	\$63,300,000	\$44,106,290	
\$121,463,226	\$48,400,000	\$134,374,749	\$17,500,000
\$336,530,303	\$554,341,323	\$123,997,036	\$258,000,000
\$18,211,013	\$55,380,487	\$18,978,879	
\$200,120,000	\$191,000,000	\$81,570,819	\$232,000,000
\$234,362,462	\$224,997,093	\$103,539,395	\$150,000,000
\$56,441,711	\$66,398,892	\$29,155,509	\$15,000,000
\$26,024,456	\$31,005,153	\$22,436,857	\$7,000,000
\$23,760,822	\$38,765,566	\$23,711,660	
\$36,605,602	\$6,485,139	\$20,489,423	\$21,000,000
\$3,091,922	\$646,700	\$1,827,435	
\$49,662,533	\$8,725,535	\$22,928,049	
\$19,097,550	\$3,104,630	\$23,084,465	\$1,500,000
\$18,882,880	\$1,936,721	\$19,347,243	\$20,000,000
\$204,462			
\$42,285,169	\$30,500,000	\$12,428,204	\$75,000,000
\$9,445,857	\$9,551,317		\$150,000
\$80,209,692	\$37,363,351	\$34,408,161	\$20,000,000
\$32,886,940	\$7,991,682	\$19,013,476	
\$444,093	\$41,106		
\$13,938,332	\$396,069	\$23,972,256	\$25,000,000
\$195,330,621	\$456,568,661	\$131,324,982	\$75,000,000
\$23,364,784	\$14,800,000	\$26,301,459	\$20,000,000
\$72,779,000	\$43,839,084	\$64,992,667	\$51,000,000
\$459,095	\$38,411,815	\$4,060,608	
\$13,040,527	\$55,787	\$16,841,759	
\$14,523,101	\$1,596,538	\$5,943,446	
\$18,844,784	\$3,320,824	\$26,752,947	\$15,000,000
\$17,807,569			\$20,000,000
\$16,235,738			\$9,000,000
\$124,740,460	\$201,810,634	\$95,831,660	\$35,000,000
\$25,926,673	\$20,064,522	\$37,541,232	
\$57,377,916	\$114,000,000	\$62,525,527	\$100,000,000
\$19,661,987	\$420,000	\$15,941,535	\$20,000,000
\$22,672,813	\$24,000,000	\$12,345,224	\$60,000,000

\$20,342,161			
\$134,529,403	\$249,002,061	\$100,735,780	\$110,000,000
\$1,530,535	\$1,017,843		\$9,000,000
\$24,413,467	\$13,308,360		
\$11,003,643			\$13,000,000
\$8,334,575	\$5,100,000	\$6,035,460	
\$423,315,812	\$642,344,000	\$320,671,450	\$225,000,000
\$35,662,731	\$20,384,530	\$35,769,990	\$17,000,000
\$43,792,641	\$27,000,000	\$22,727,928	\$35,000,000
\$25,031,037	\$25,156,752	\$31,032,170	\$53,000,000
\$10,232,081	\$20,590,780	\$27,357,887	
\$183,135,014	\$343,936,008	\$96,337,909	\$72,500,000
\$6,795			
\$54,607,383	\$65,000,000	\$10,459,743	\$25,000,000
\$15,432,542			
\$4,548,331			
\$148,761,765	\$70,232,344	\$117,411,877	\$27,500,000
\$24,633,730	\$42,000,000	\$30,497,752	
\$55,011,732	\$32,000,000	\$53,922,172	
\$5,529,144	\$2,590,061		
\$36,580,083	\$1,734,720	\$37,827,956	
\$50,572,589	\$94,983,557	\$21,129,239	\$40,000,000
\$75,802,010	\$54,600,000	\$41,628,625	\$54,000,000
\$75,030,163	\$174,457,952	\$87,654,390	\$100,000,000
\$10,597,734	\$1,000,000	\$4,982,989	
\$250,863,268	\$323,617,573	\$153,286,880	\$110,000,000
\$100,289,690	\$72,929,590	\$37,997,932	\$175,000,000
\$9,396,870			\$15,000,000
\$43,107,979	\$49,000,000	\$26,948,545	\$28,000,000
\$97,822,171	\$71,510,807	\$78,345,374	
\$7,459,300	\$34,604,805	\$7,342,760	\$35,000,000
\$13,395,961			\$20,000,000
\$17,544,812	\$16,061,597	\$16,167,194	\$7,500,000
\$40,435,190	\$4,800,000	\$30,880,666	\$30,000,000
\$43,545,364			
\$140,125,968	\$112,900,000	\$40,775,094	\$180,000,000
\$21,000,147	\$893,444	\$49,920,014	\$15,000,000
\$103,365,956	\$51,600,000	\$53,661,766	\$75,000,000
\$35,552,383	\$33,897,819	\$25,338,142	\$76,000,000
\$11,205,901	\$8,667,942	\$12,345,494	
\$43,760,605	\$21,540,742	\$38,478,972	
\$64,665,672	\$113,000,000	\$70,937,146	\$149,000,000
\$72,778,712	\$10,800,000	\$49,039,094	\$11,000,000
\$228,498	\$4,506,731		
\$20,568,319	\$2,971,947	\$13,668,418	
\$128,505,958	\$133,066,786	\$62,652,669	\$18,000,000
\$168,213,584	\$84,800,000	\$92,291,863	

\$39,143,839	\$29,500,000	\$8,293,678	\$20,000,000
\$12,406,646	\$478,928		
\$15,074,191	\$25,072,851	\$4,845,361	\$80,000,000
\$59,908,565	\$35,468,177	\$33,880,479	
\$10,299,782	\$73,200,000		\$15,500,000
\$38,989,507	\$50,200,000	\$22,208,165	
\$73,661,010	\$66,500,000	\$71,541,095	\$75,000,000
\$11,989,328	\$516,860	\$6,679,409	\$35,000,000
\$5,755,286	\$766,543	\$853,973	\$55,000,000
\$71,985,628	\$56,543,671	\$49,635,451	\$22,500,000
\$82,234,139	\$54,700,000	\$41,355,482	\$25,000,000
\$50,866,635	\$66,918,416	\$43,279,287	\$40,000,000
\$10,010,209	\$15,737,014	\$39,102,832	
\$22,530,295	\$38,000,000		
\$7,006,708			\$4,000,000
\$53,089,891	\$54,806,115	\$45,348,399	\$40,000,000
\$38,634,938	\$96,921,737	\$25,077,781	\$70,000,000
\$198,000,317	\$187,000,000	\$203,202,864	\$85,000,000
\$15,242,450	\$12,977,992	\$12,376,741	
\$39,739,367	\$47,119,211	\$16,820,895	\$20,000,000
\$118,594,548	\$27,000,000	\$49,169,389	\$61,000,000
\$16,574,590	\$4,040,071	\$16,762,012	
\$8,130,530			
\$35,374,833	\$18,400,000	\$15,902,523	
\$7,233,485			
\$5,694,308			
\$17,510,118	\$32,242,273	\$8,957,029	
\$12,559,771	\$645,640	\$13,549,608	\$14,000,000
\$82,985,708	\$61,000,000	\$83,550,733	\$82,500,000
\$11,614,790			
\$42,674,040	\$26,205,530	\$23,917,497	
\$68,501			
\$47,003,582	\$48,200,000	\$57,244,093	\$60,000,000
\$38,432,823	\$3,048,028	\$33,990,308	\$30,000,000
\$118,823,091	\$84,000,000	\$104,029,214	\$75,000,000
\$33,080,084	\$50,000,000	\$20,971,999	\$85,000,000
\$11,052,958	\$3,087,444	\$9,691,414	\$10,500,000
\$47,852,604	\$33,608,739	\$33,205,167	
\$18,663,911	\$18,640,726	\$8,050,112	\$16,500,000
\$12,044,087	\$31,000,000	\$13,059,709	\$5,700,000
\$27,838,408	\$5,986,288	\$28,754,050	\$12,000,000
\$16,379,582	\$4,476,064		
\$2,730,296	\$10,695,293		\$3,700,000
\$2,956,339	\$80,397		\$9,000,000
\$13,932,383	\$3,366,768	\$17,210,792	
\$84,500,122	\$23,000,000	\$76,815,057	
\$65,328,121	\$50,000,000	\$51,183,795	\$12,000,000

\$85,105,259	\$104,796,444	\$96,372,487	\$85,000,000
\$21,471,047	\$5,149,714	\$21,227,639	
\$25,126,214	\$37,100,000	\$19,733,449	\$40,000,000
\$148,213,377	\$14,800,000	\$84,806,563	\$73,000,000
\$14,426,251			
\$70,269,899	\$85,450,189	\$34,655,821	\$24,000,000
\$9,176,787	\$9,755,330	\$5,434,934	\$15,000,000
\$33,302,167	\$196,397,938	\$28,162,446	\$25,000,000
\$482,355	\$233,349		
\$33,602,376	\$28,300,000	\$45,095,837	\$53,000,000
\$59,891,098	\$40,632,083	\$55,497,574	\$8,000,000
\$28,426,747	\$113,275,517	\$18,693,368	
\$13,756,082	\$55,000,000	\$13,618,088	\$13,000,000
\$31,366,978	\$150,081	\$31,456,820	
\$292,004,738	\$646,464,126	\$220,651,146	\$150,000,000
\$15,962,471	\$44,900,000	\$16,617,894	\$40,000,000
\$133,311,000	\$157,228,042	\$140,647,116	\$90,000,000
\$34,020,814	\$28,000,000	\$23,693,992	\$33,000,000
\$33,000,880	\$1,457,899	\$18,301,944	
\$17,606,684	\$30,756,832	\$16,831,973	\$6,000,000
\$210,614,939	\$245,453,242	\$261,158,713	\$60,000,000
\$162,586,036	\$143,500,000	\$90,820,939	\$55,000,000
\$35,193,167	\$41,400,000	\$27,501,523	\$32,000,000
\$833,532	\$194,090		



Distributor	Count	Genre	Count
20th Century Fox	25	Action	20
Buena Vista	16	Adventure	23
Dreamworks SKG	3	Black Comedy	1
Focus Features	5	Comedy	56
Focus/Rogue Pictures	1	Documentary	4
Fox Searchlight	17	Drama	54
Freestyle Releasing	1	Horror	15
Lionsgate	13	Musical	3
MGM	7	Romantic Comedy	9
Miramax	2	Thriller/Suspense	26
Miramax/Dimension	2		
New Line	10		
Paramount Pictures	16		
Paramount Vantage	5		
PictureHouse	3		
Regent Releasing	1		
Rocky Mountain Pictures	1		
Samuel Goldwyn Films	1		
Sony Pictures	26		
Sony/Screen Gems	2		
Sony/TriStar	1		
The Documentary Group	1		
Typecast Releasing	1		
Universal	18		
Warner Bros.	22		
Warner Independent Pictures	1		
Weinstein Co.	8		
Weinstein/Dimension	2		

30  
25  
20  
15  
10  
5  
0

Recoded Distributor	Count	Recoded Genre	Count
New Line	10	Action	20
Lionsgate	13	Adventure	23
Sony Pictures	26	Comedy	56
Buena Vista	16	Drama	54
Paramount Pictures	16	Horror	15
Warner Bros.	22	Thriller/Suspense	26
20th Century Fox	25	Other	17
Fox Searchlight	17		
Universal	18		
Other	48		

6  
5  
4  
3  
2  
1

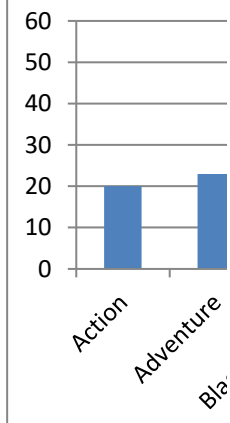
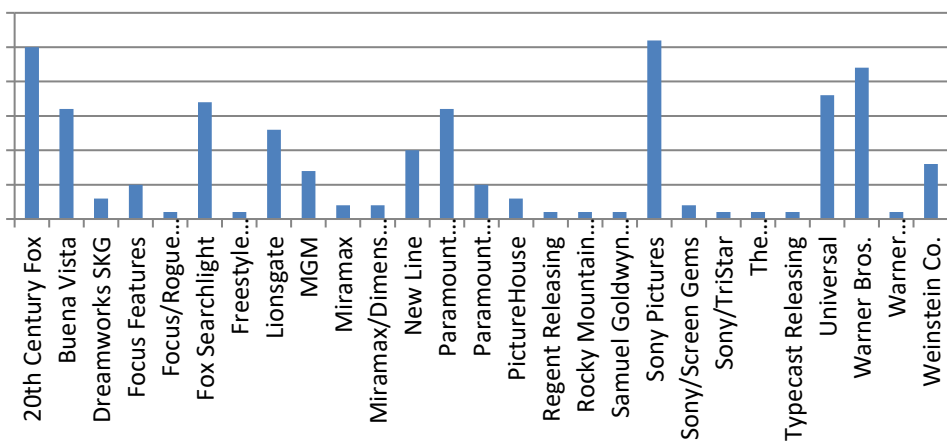




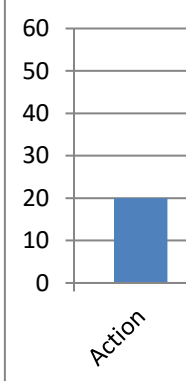
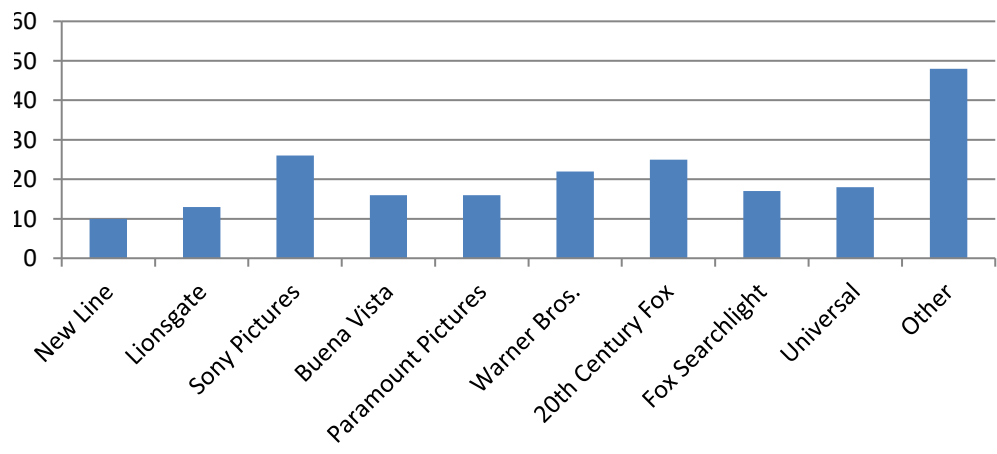




### Count of Distributor



### Count of Recoded Distributor





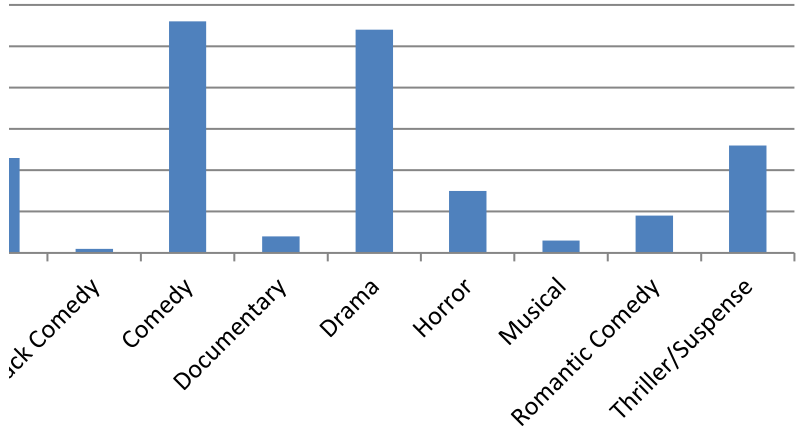




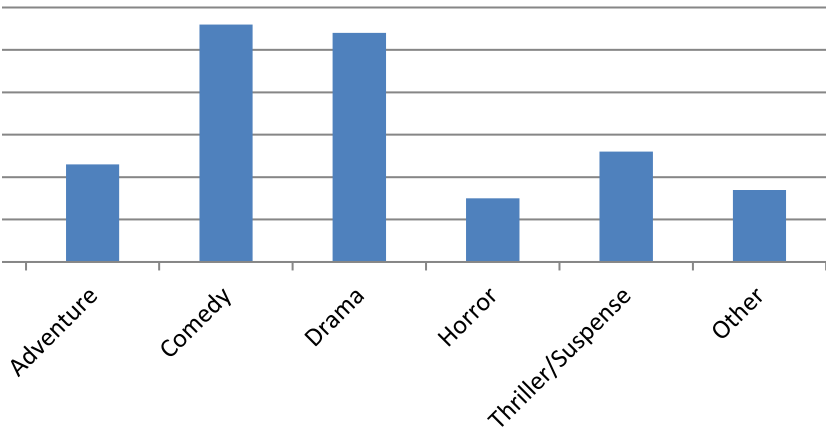




### Count of Genre



### Count of Recoded Genre



Numbers of six-packs purchased				
Customer	Beer A	Beer B	Beer C	All three
1	2	5	2	9
2	2	2	6	10
3	2	4	5	11
4	1	6	0	7
5	4	0	2	6
6	3	1	3	7
7	6	1	6	13
8	0	1	4	5
9	3	0	3	6
10	0	1	4	5
11	1	0	5	6
12	1	1	0	2
13	0	1	3	4
14	2	4	6	12
15	3	5	1	9
16	1	0	3	4
17	0	1	6	7
18	6	0	0	6
19	6	6	0	12
20	3	3	6	12
21	0	3	0	3
22	4	0	3	7
23	1	2	0	3
24	2	2	6	10
25	4	6	0	10
26	1	4	0	5
27	5	3	5	13
28	0	4	2	6
29	4	0	4	8
30	0	1	1	2

Similar averages to those quoted in  
 Beer A    Beer B    Beer C  
 8.173913   7.695652   7.818182

Columns B-D contain random numbers and column E contains their sums. The AVERAGE function to calculate the average of the numbers in column E where the number in column A is 0, columns P and Q. Therefore, these particular numbers are large ones.

As you can see, the "Any" average is not always the same as the "Beer A" average. Of course, there are other types of customer behavior that can lead to large numbers.

Still, there is nothing that guarantees that the data to the right is correct. Now, if columns P and Q tend to be small (a form of bias), then the "Any" average is not always the same as the "Beer A" average. Of course, there are other types of customer behavior that can lead to large numbers.

n case

Any

7.333333

Numbers of six-packs purchased

Customer	Beer A	Beer B	Beer C	All three
1	2	1	0	3
2	0	3	2	5
3	1	1	1	3
4	4	1	1	6
5	0	3	4	7
6	1	1	1	3
7	4	1	1	6
8	5	0	0	5
9	6	0	1	7
10	6	0	0	6
11	0	5	4	9
12	0	4	0	4
13	5	1	1	7
14	5	1	1	7
15	4	0	0	4
16	4	0	1	5
17	5	0	1	6
18	5	0	0	5
19	3	0	1	4
20	6	0	0	6
21	6	1	0	7
22	5	0	0	5
23	5	0	0	5
24	2	0	1	3
25	1	1	1	3
26	4	0	0	4
27	0	2	0	2
28	0	4	4	8
29	0	1	6	7
30	5	0	1	6

numbers of purchases, and  
Columns G-I use the AVERAGEIF  
ages in the case, whereas the Any  
e average of column E. Press the F9  
umbers and averages change.

verage tends to be the lowest. This is  
verages all the numbers in column  
e only over the numbers in column  
n B (or C or D) is positive.  
mbers in column E tend to be the

guantees this behavior. Look at the  
mn O is positive, columns P and Q  
and loyalty to brand A), whereas if  
Q can be larger. In this case, the  
ie lowest. In fact, it is usually larger  
course, we could build in many  
vior, depending on the random

Averages quoted in case

Beer A	Beer B	Beer C	Any
5.043478	5.4375	5.666667	5.266667