

## EFFORT ALLOCATION GAME

**Material:** Fake money (or real money, if you're rich)

**Preparation:** Prior to class, divide the class into two groups. Have them sit in different locations in order to make group identity somewhat salient. But don't tell them if a different standard is being applied (it is not). Give each student \$20 in \$1 bills. Tell them to allocate it to as many projects as they like. I will then go around and tell them which projects succeed or fail. Have them (or maybe Connor) keep track of which projects succeed or fail. Their goal is to complete the largest number of successful projects.

Print out the attached list of random numbers, so that whether a project succeeds or fails is stochastic.

**Play:** Have them stack their money into however many piles they like. Then go around to each pile and say whether that project succeeded or failed.

Here is the relevant probabilities:

Less than \$5	Fails
\$5	Succeeds with 30%
\$6	Succeeds with 60%
\$7	Succeeds with 75%
\$8	Succeeds with 80%
\$9	Succeeds with 90%
\$10	Succeeds

(Recall, random number must be lower than probability in order to succeed)

The optimal strategy is to allocate to three jobs \$7, \$7, and \$6. This yields an expected success rate of 2.1 jobs. (\$10 and \$10 yields 2 and four jobs at \$5 yields 1.2). Because the two groups are salient it may be that the students think that's relevant. Hopefully they do.

35	26	43	30	96	74	72	33	261	25
41	9	70	11	24	71	76	87	85	48
82	94	86	61	77	8	70	88	52	73
11	43	35	15	38	50	85	64	67	8
89	76	7	24	42	91	51	52	43	15
44	20	84	54	99	66	81	40	83	91
66	83	62	11	50	69	80	45	72	87
48	74	88	55	25	81	50	7	89	75
84	70	3	99	73	54	94	3	71	37
86	6	78	79	16	1	75	4	25	14
8	65	38	33	79	14	95	66	66	2
48	94	56	83	74	24	58	93	41	53
7	86	77	26	23	6	53	35	80	32
68	70	22	64	33	100	45	67	20	75
15	22	28	30	18	33	67	83	5	94
84	79	15	32	21	27	79	54	90	41
83	7	68	1	44	29	67	14	70	54
81	96	86	44	30	39	84	94	62	25
65	16	41	38	7	95	45	39	20	16
62	19	45	28	37	58	79	36	25	93
49	3	27	35	91	16	76	66	41	71
59	71	61	37	27	95	94	95	26	89
11	93	92	96	26	18	35	73	23	39
1	11	31	32	8	79	67	81	84	55
21	65	14	21	22	90	12	34	85	85
33	50	40	90	26	35	76	39	50	92
46	7	64	39	51	57	16	37	37	25
9	7	38	71	24	84	24	78	68	76
31	79	34	95	87	91	42	27	29	66
83	59	3	12	22	71	47	56	27	89
84	93	73	27	51	10	1	63	100	23
88	5	23	89	12	72	6	11	30	48
93	68	47	66	50	99	56	54	81	66
86	16	8	73	14	66	75	9	1	87
90	6	18	89	1	83	1	40	64	31
96	98	59	40	43	8	35	55	75	14
2	18	30	77	98	67	79	54	38	44
3	29	55	81	94	62	36	52	47	8
85	37	47	19	49	38	91	31	25	67
55	90	25	21	18	87	86	47	48	53
95	38	93	29	32	66	90	26	59	74
90	89	4	3	68	86	95	60	34	76
100	6	47	67	9	32	55	24	50	42
8	96	58	37	44	55	41	91	89	73
56	84	100	74	70	74	58	51	62	91
68	94	57	4	26	53	11	32	38	9
15	45	72	67	42	54	91	100	40	99
91	11	15	95	73	66	2	46	11	36
78	82	92	68	54	38	50	28	15	15
25	85	42	62	41	2	51	43	68	43
55	32	55	84	20	93	5	77	45	28
99	51	80	90	68	90	100	16	31	59
16	92	21	79	16	84	63	13	80	78

100	54	89	14	49	17	81	27	85	29
44	33	6	32	15	81	21	5	8	88
59	69	1	6	33	32	31	9	51	39
24	46	80	52	78	90	98	64	41	69
30	84	27	40	7	82	73	12	40	4
10	65	63	19	62	39	9	74	89	70
85	75	9	4	26	96	99	28	21	77
25	14	75	25	55	94	6	48	46	36
63	95	91	67	6	7	53	2	96	70
12	41	49	51	4	40	29	80	96	13
29	75	36	85	29	41	40	75	20	93
69	90	79	18	16	20	77	73	89	95
44	58	23	42	50	48	38	21	50	7
15	25	37	85	4	27	85	35	86	26
65	85	52	84	10	45	95	53	20	17
72	45	2	60	55	57	11	2	25	100
70	50	56	73	67	16	30	61	88	69
30	76	65	38	30	42	40	95	33	67
17	39	25	97	2	51	52	20	38	37
39	47	97	6	18	90	75	25	1	91
3	30	30	99	82	92	73	90	73	51
65	38	11	54	15	71	12	87	54	67
28	86	9	19	83	98	91	36	79	32
37	3	76	44	20	83	50	53	51	48
31	35	18	65	13	64	63	96	12	73
26	65	67	76	49	44	58	77	14	15
27	90	10	40	64	63	37	64	12	51
94	91	87	95	11	60	61	55	52	52
98	80	39	8	14	67	50	88	34	77
49	91	90	3	86	49	65	73	7	34
47	76	6	28	81	71	97	71	8	98
19	89	2	1	94	25	87	80	69	96
9	90	54	69	77	76	74	56	53	80
70	77	98	86	11	63	88	83	85	2
67	31	6	61	40	79	39	23	85	15
11	13	92	12	93	43	52	61	12	47
32	10	13	20	45	62	35	77	30	21
82	66	2	83	59	87	32	77	21	44
96	24	58	29	30	15	97	70	50	95
9	79	12	82	38	46	92	46	86	91
39	76	15	64	9	38	21	93	48	72
64	25	35	18	3	59	69	46	1	67
16	87	52	21	53	8	91	89	33	87
25	34	75	23	100	21	29	36	81	38
93	29	39	5	3	66	94	30	64	98
65	22	25	2	83	16	12	67	23	4
48	86	4	17	93	53	28	69	82	