



Name _____ Date _____

Instructor _____ Section _____

Evaluating Muscular Strength: The Estimated 1 RM Test

You can use the following procedure to determine your estimated 1 RM for any particular lift (e.g., chest press):

1. First, perform a set of 10 repetitions using a light weight.
2. Next, add 5 lb. and perform up to 10 repetitions.
3. Repeat this process until you reach a weight that you can lift 2–10 times. This is called your repetitions maximum (RM) for that weight. For example, if you can bench press 100 lb. only 6 times, then 100 lb. is your 6 RM weight.

Be sure to have an experienced instructor supervise the process so that your 10 RM weight can be discovered in fewer than five trials. Rest about 5 minutes after each trial to recover.

After determining your 2–10 RM, you can use Table 4.5 to estimate your 1 RM. For example, if your RM for 100 lb. is 6, then the estimate for the 1 RM would be about 116 lb.

Remember, strength is largely determined by your body size. Thus, to determine your “standardized” muscle strength from the estimated 1 RM, use the same formula that you used in Lab 4.1:

$$\text{muscle strength score} = \frac{1 \text{ RM weight}}{\text{body weight}} \times 100$$

Record your muscular strength scores below, and use Table 4.3 or Table 4.4 in Laboratory 4.1 to determine your fitness category.

Age: _____ Body weight: _____ lb

Date: _____

Exercise	1 RM (lb)	Muscular Strength	Fitness Category
Seated chest press			
Leg press			

GOAL SETTING

1. Based on your results, write a goal to maintain or improve your current fitness level. For example, if your score was “fair” on this test, your goal might be to improve your fitness level to a “good” rating. If your fitness level indicated a score of “excellent,” your goal might be to maintain your current fitness status.

Goal: _____

2. Write three strategies for how you intend to achieve the goal you wrote. For example, one strategy for improving your current fitness status could be to perform 1 set of 10 repetitions at 50% of your 1 RM, 3 times a week. To progressively overload the muscles, increase the number of sets, and increase the weight load by 5–10 lb.

1.

2.

3.

LABORATORY 4.2 (continued)

TABLE 4.5 1 RM Prediction Table

Wt (lb)	Repetitions									
	1	2	3	4	5	6	7	8	9	10
10	10	10	11	11	11	12	12	12	13	13
15	15	15	16	16	17	17	18	19	19	20
20	20	21	21	22	23	23	24	25	26	27
25	25	26	26	27	28	29	30	31	32	33
30	30	31	32	33	34	35	36	37	39	40
35	35	36	37	38	39	41	42	43	45	47
40	40	41	42	44	45	46	48	50	51	53
45	45	46	48	49	51	52	54	56	58	60
50	50	51	53	55	56	58	60	62	64	67
55	55	57	58	60	62	64	66	68	71	73
60	60	62	64	65	68	70	72	74	77	80
65	65	67	69	71	73	75	78	81	84	87
70	70	72	74	76	79	81	84	87	90	93
75	75	77	79	82	84	87	90	93	96	100
80	80	82	85	87	90	93	96	99	103	107
80	80	82	85	87	90	93	96	99	103	107
85	85	87	90	93	96	99	102	106	109	113
90	90	93	95	98	101	105	108	112	116	120
95	95	98	101	104	107	110	114	118	122	127
100	100	103	106	109	113	116	120	124	129	133
105	105	108	111	115	118	122	126	130	135	140
110	110	113	116	120	124	128	132	137	141	147
115	115	118	122	125	129	134	138	143	148	153
120	120	123	127	131	135	139	144	149	154	160
125	125	129	132	136	141	145	150	155	161	167
130	130	134	138	142	146	151	156	161	167	173
135	135	139	143	147	152	157	162	168	174	180
140	140	144	148	153	158	163	168	174	180	187
145	145	149	154	158	163	168	174	180	186	193
150	150	154	159	164	169	174	180	186	193	200
155	155	159	164	169	174	180	186	192	199	207
160	160	165	169	175	180	186	192	199	206	213
165	165	170	175	180	186	192	198	205	212	220
170	170	175	180	185	191	197	204	211	219	227
175	175	180	185	191	197	203	210	217	225	233
180	180	185	191	196	203	209	216	223	231	240
185	185	190	196	202	208	215	222	230	238	247
190	190	195	201	207	214	221	228	236	244	253
195	195	201	206	213	219	226	234	242	251	260
200	200	206	212	218	225	232	240	248	257	267
205	205	211	217	224	231	238	246	255	264	273

LABORATORY 4.2 (continued)

Wt (lb)	Repetitions									
	1	2	3	4	5	6	7	8	9	10
210	210	216	222	229	236	244	252	261	270	280
215	215	221	228	235	242	250	258	267	276	287
220	220	226	233	240	248	256	264	273	283	293
225	225	231	238	245	253	261	270	279	289	300
230	230	237	244	251	259	267	276	286	296	307
235	235	242	249	256	264	273	282	292	302	313
240	240	247	254	262	270	279	288	298	309	320
245	245	252	259	267	276	285	294	304	315	327
250	250	257	265	273	281	290	300	310	322	333

Source: Adapted from M. Brzycki, "Strength Testing: Predicting a One-Rep Max from a Reps-to-Fatigue." Reprinted with permission from the January 1993 *Journal of Physical Education, Recreation, and Dance*.

To submit the completed lab, save the form to your computer and email it to your instructor or upload it to their digital dropbox as directed.