Examples of Common ES Calculations using the Computator
http://psych.unl.edu/psycrs/statpage/computator_131a.xls

Remember: Whenever possible, use "direct computations" rather than "d→ r" or "r → d" conversions

1. In this study of adolescents the between groups design showed the Cx group with n=10 had poorer performance than that Tx1 group with n=11, with a t(19) = 2.22, p=.039. d = .9706 r = .454 Cx < Tx	F or t or means or r -> d Enter t => 2.22 Enter n1 => 10 Enter n2 => 11 d = 0.970	F or t or d ->r Enter t => 2.22 Enter df-error => 19 r = 0.454 Rem for t the dferror = (n1 + n2 – 2)
2. For a between groups design to study adolescents, the Cx (n=10) condition has a lower mean performance score and the Tx1 (n=11) condition has a higher mean, F(1,19)=4.93, MSe = ?.??. d = .970 r = .454 Cx < Tx Rem for F the dferror = (n1 + n2 – 2)	F or t or means or r -> d Enter F => 4.93 Enter n1 => 10 Enter n2 => 11 d = 0.970	F or t or d ->r Enter F => 4.93 Enter df-effect => 1 Enter df-error => 19 r = 0.454 Rem for F the dferror = (n1 + n2 – 2)
3. For a study of adolescents the Cx condition had a lower mean performance score = 5.40, while the Tx1 condition had a higher mean = 7.18, F(1,19) = ?.??, MSe = 3.37 d = .964 r = .434 Cx < Tx	pr_means-> r & d Select the type of ANOVA design => Between Groups Enter mean #1 => 5.4 Enter mean #2 => 7.17 Enter MSe (Mean Square Error) => 3.37 r = 0.434 d = 0.964	The difference in d between 3 and 1&2 is rounding error – from converting MSe to a pooled std. The r calculation is not "direct" but is converted from d. That's why it doesn't match 1 & 2.

4. For a study of adolescents the Cx condition had a lower mean performance score = 5.40 (n=10), while the Tx1 condition had a higher mean = 7.18 (n=11), F(1,19) = 4.93, MSe = ?.??

d = .970 r = .436 Cx < Tx

Having F & ns, we could use the strategy in 2 above. But, if we want the MSE for some reason we can calculate it from that info.

pr_means-> r & d

For BG ANOVA Only	g1 mean =>	5.4
mputing MSE	g1 n =>	10
	g2 mean =>	7.17
	g2 n =>	11
	F =>	4.93
	Mse =	3.33

pr_means-> r & d

Select the type of ANOVA design =>	Between Groups
Enter mean #1 =>	5.4
Enter mean #2 =>	7.17
Enter MSe (Mean Square Error) =>	3.33
r =	0.436
d =	0.970

5. For a study of adolescents the Cx condition (n =10) had a lower mean performance score = 5.40 and std = 1.71 , while the Tx1 condition (n=11) had a higher mean = 7.18 and std = 1.94.

d = .9702 r = .436 Cx < Tx

F or t or means or r -> d

		G1	G2
Enter =>	mean =>	5.4	7.18
	std =>	1.71	1.94
	n =>	10	11
	d =	0.9702	

F or t or d ->r

Enter d =>	0.9702
r =	0.436

We don't have a formula to compute r directly from this info.

Notice this converted r is much like the one in 3&4 above & different from 1&2 that are computed directly.

6. When we compared the Cx & Tx conditions we found the Tx did better, and also found the effect size to be d = .97, what is r?

r = .436 Cx < Tx

Notice the "converted" r is not the same as that computed directly.

F or t or d ->r

Enter d =>	0.97
r =	0.436

7. When we compared the Cx & Tx conditions we found the Tx did better, and also found the effect size to be r = .45, what is d?

d = 1.129 Cx < Tx

F or t or means or r -> d

Enter r =>	0.45
d =	1.129

The conversion that produces the most "bias" is converting r to d. d estimated this way will always be bigger than using other computation or estimation methods.

8. We compared the Cx, Tx1 and Tx2 conditions using a sample of adolescents & found F(2,26) = 8.87. p=.002, MSe=3.67. They found the groups had means of Cx = 5.4, Tx1 = 7.17, and Tx2 = 8.20.

d = .924 r = .419 Cx < Tx

pr_means-> r & d

Select the type of ANOVA design =>	Between Groups
Enter mean #1 =>	5.4
Enter mean #2 =>	7.17
Enter MSe (Mean Square Error) =>	3.67
r =	0.419
d =	0.924

We can use just 2 means from a k-group design that are the conditions we are investigating. The MSe is likely to differ in a 2-group and 3-group design, but no more than across 2-group replications.

9. Our study compared Cx & Tx for children, adolescents and adults. We found a significant interaction (F(2,64) = 4.456, p < .032, MSe = 3.09. Here are the means from that study.

	Cx	Tx	
Children	4.45	6.12	5.29
Adolescents	5.4	7.17	6.29
Adults	6.21	11.54	8.88
	5.35	8.28	

d = 1.007 r = .450 Cx < Tx

pr_means-> r & d

Select the type of ANOVA design =>	Between Groups
Enter mean #1 =>	5.4
Enter mean #2 =>	7.17
Enter MSe (Mean Square Error) =>	3.09
r =	0.450
d =	1.007

Because the population for the meta analysis is "adolescents" we would use just the data from the "simple effect of Cx-Tx for adolescents"

We can use just 2 means from a factorial design that are the conditions we are investigating. The MSe is likely to differ in a 2-group and a factorial design, but no more than across 2-group replications.

10. Our study compared Cx & Tx for 13, 15, & 17 year-olds. We found a significant interaction (F(2,64) = 6.621, p < .021, MSe = 3.21. Here are the means from that study.

	Cx	Tx	
13 year olds	4.45	5.21	4.83
15 year olds	5.12	7.5	6.31
17 year olds	6.64	8.8	7.72
	5.40	7.17	

d = .988 r = .443 Cx < Tx

pr_means-> r & d

Select the type of ANOVA design =>	Between Groups
Enter mean #1 =>	5.4
Enter mean #2 =>	7.17
Enter MSe (Mean Square Error) =>	3.21
r =	0.443
d =	0.988

Because the population for the meta analysis is "adolescents" and all age groups are "adolescents" we would use just the data from the marginal means of the "main effect of Cx-Tx"

We can use just 2 means from a factorial design that are the conditions we are investigating. The MSe is likely to differ in a 2-group and a factorial design, but no more than across 2-group replications.