Statistics Worksheet # 4.2

z's, t's & t-sub-d's

Problem 1

If: $\sigma = 2.05$
$\mu = 1.00$
$X = 1.43$

14. Which statistical test would determine if X was significantly higher than μ?
15. What is the probability of getting this value for X?
16. If alpha were set at .05, is this difference statistically significant?

Problem 2

If: $s = 2.45$
$\mu = 1.00$
Mean of X = 1.43
N = 28

17. Which statistical test would tell if the Mean of X was significantly higher than μ
18. Alpha is set at .05 for this One-Tailed test, what are the degrees of freedom?
19. What is the tabled value for this test?
20. Is this difference between the mean of X and μ statistically significant?

Problem 3

If:

Subject	Post-Test Score	Pre-Test Score
1	18	12
2	43	39
3	25	17
4	36	13
5	37	34
6	36	26

21. Which statistical test would tell if the post-test scores had significantly improved over the pre-test scores?

22. Alpha is set at .05 for this One-Tailed test, what are the degrees of freedom?

23. What is the tabled value for this test?

24. What is the average increase or difference in scores? (Hint average of D)

25. What is the standard deviation of the difference in scores (Hint s_D)

26. Is this difference statistically significant?

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Problem 4

If:

Subject	Post-Test Score	Pre-Test Score
1	28	17
2	53	42
3	25	12
4	36	34
5	47	38
6	56	40
7	44	34
8	43	33

27. Which statistical test would tell if the post test scores had significantly improved over the pre-test scores?

28. Alpha is set at .05 for this One-Tailed test, what are the degrees of freedom?

29. What is the tabled value for this test?

30. What is the average increase or difference in scores? (Hint average of D)

31. What is the standard deviation of the difference in scores (Hint s_D)

32. Is this difference statistically significant?