

# True/False Answer Key

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January 18, 2005

Answer true or false.

1. *T.*
2. *F.*
3. *T.*
4. *T.*
5. *F.*
6. *F.*
7. *F.*
8. *T.*
9. *T.*
10.  $U \cap W$ ,  $U + W$  are subspaces,  $U \cup W$  is not.
11.  $\frac{n(n+1)}{2}$
12. *F.*
13. *F.*
14. *T.*
15. *F.*
16. *T.*
17. If  $\pi_1 = (2\ 1\ 4\ 3)$  and  $\pi_2 = (1\ 3\ 4\ 2)$ , then  $\pi_1\pi_2 = (1\ 2\ 4)$ .  
(note that we delete the singleton, (3) by convention.)

18. *T.*

19. *T.*

20. *F.*

21. *F.*

22. *F.*

23. *T.*

24. *T.*

25. *F.*

26. *T.*

27. *F* - although it is worth noting that this statement is true if we stipulate non-zero vectors.

28. To be honest, I really did not feel like doing this one. If someone wants to email me the answer, I'll post it. It probably is worth completing to review for the test, however.

29. *F.*

30. *T.*

31. *F.*

32. *F.*

33. *T.*

34. *F.*

35. *T.*

36. *F.*

37. *T.*

38. *F.*

39. *F.*

40. *T.*