

TS Tuition Math - Hwk #4 - Matrices and Vectors ANSWERS

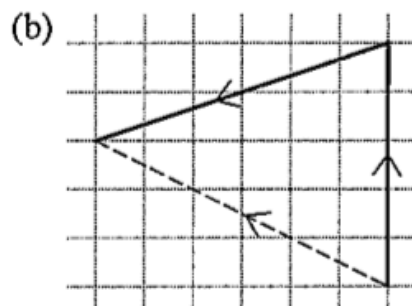
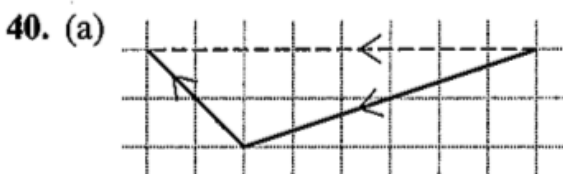
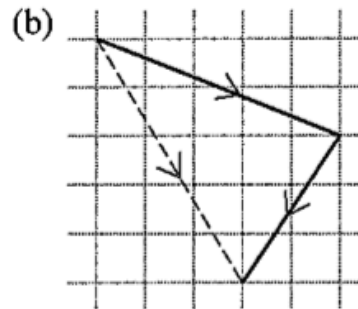
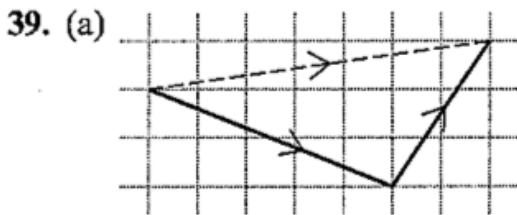
Exercise 1

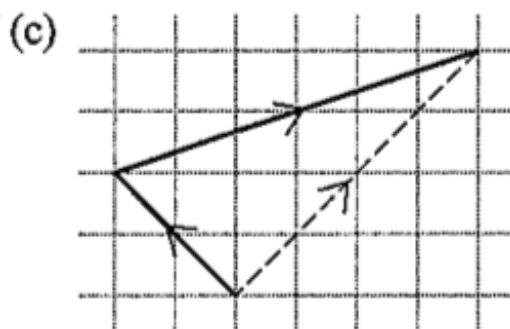
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|--|--|--|--|
| 1. $\begin{pmatrix} 2 & 4 \\ 4 & 2 \end{pmatrix}$ | 2. $\begin{pmatrix} 1 & 6 & -1 \\ 7 & -10 & 6 \end{pmatrix}$ | 3. — | 4. $\begin{pmatrix} -4 & 2 \\ 0 & 0 \end{pmatrix}$ |
| 5. (8 10) | 6. $\begin{pmatrix} 0 & 15 \\ 3 & -6 \end{pmatrix}$ | 7. $\begin{pmatrix} 0 & -3 \\ 1 & 0 \\ -9 & -5 \end{pmatrix}$ | 8. $\begin{pmatrix} 4 & 3 \\ 7 & 6 \end{pmatrix}$ |
| 9. — | 10. $\begin{pmatrix} 6 & 7 \\ 5 & 0 \end{pmatrix}$ | 11. $\begin{pmatrix} -1 & 9 \\ -2 & -1 \\ 25 & 10 \end{pmatrix}$ | 12. $\begin{pmatrix} 1 & -5\frac{1}{2} \\ \frac{1}{2} & 4 \end{pmatrix}$ |
| 13. $\begin{pmatrix} -1 & 12 \\ 4 & 7 \end{pmatrix}$ | 14. $\begin{pmatrix} 15 & 20 \\ -4 & -9 \end{pmatrix}$ | 15. $\begin{pmatrix} 5 & -10 \\ 2 & 7 \end{pmatrix}$ | 16. $\begin{pmatrix} 3 & 14 \\ -2 & 9 \end{pmatrix}$ |
| 17. $\begin{pmatrix} 12 \\ 13 \end{pmatrix}$ | 18. $\begin{pmatrix} 5 \\ 13 \end{pmatrix}$ | 19. $\begin{pmatrix} 14 & 1 \\ -32 & -13 \end{pmatrix}$ | 20. $\begin{pmatrix} 8 & -27 \\ 23 & -2 \end{pmatrix}$ |

Exercise 2

- | | | | | | | | |
|---|--|---|--|---|---|---|---|
| 13. $\begin{pmatrix} -11 \\ 9 \end{pmatrix}$ | 14. $\begin{pmatrix} -1 \\ -4 \end{pmatrix}$ | 15. $\begin{pmatrix} 4 \\ 8 \end{pmatrix}$ | 16. $\begin{pmatrix} 4 \\ 3 \end{pmatrix}$ | 17. $\begin{pmatrix} 8 \\ -7 \end{pmatrix}$ | 18. $\begin{pmatrix} 18 \\ -1 \end{pmatrix}$ | 19. $\begin{pmatrix} 7 \\ -4 \end{pmatrix}$ | 20. $\begin{pmatrix} -18 \\ -16 \end{pmatrix}$ |
| 21. $\begin{pmatrix} 13 \\ 19 \end{pmatrix}$ | 22. $\begin{pmatrix} 8 \\ 5 \end{pmatrix}$ | 23. $\begin{pmatrix} 10 \\ -13 \end{pmatrix}$ | 24. $\begin{pmatrix} 17 \\ 35 \end{pmatrix}$ | 25. $\begin{pmatrix} 4 \\ 8 \end{pmatrix}$ | 26. $\begin{pmatrix} 4 \\ 3 \end{pmatrix}$ | 27. $\begin{pmatrix} -1 \\ 1 \end{pmatrix}$ | 28. $\begin{pmatrix} -16 \\ 3 \end{pmatrix}$ |
| 29. $\begin{pmatrix} -2\frac{1}{2} \\ -3 \end{pmatrix}$ | 30. $\begin{pmatrix} -3\frac{1}{2} \\ \frac{1}{2} \end{pmatrix}$ | 31. $\begin{pmatrix} -3 \\ -7 \end{pmatrix}$ | 32. $\begin{pmatrix} -2 \\ 12 \end{pmatrix}$ | 33. $\begin{pmatrix} 4 \\ 8 \end{pmatrix}$ | 34. $\begin{pmatrix} -5\frac{1}{2} \\ 4\frac{1}{2} \end{pmatrix}$ | 35. $\begin{pmatrix} 0 \\ 0 \end{pmatrix}$ | 36. $\begin{pmatrix} -2\frac{1}{2} \\ -6 \end{pmatrix}$ |

38. (a) true (b) true (c) true (d) true (e) false (f) false





Exercise 3

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1. 5

2. $\sqrt{17}$

3. 13

4. 3