Introduction to vectors: answers

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Answers to questions relating to the guide on introduction to vectors

*These are the answers to* [*Questions: Introduction to vectors*](qs-introductiontovectors.qmd)*.* **Please attempt the questions before reading these answers!**

## Q1

Are these vectors parallel?

1.1. so is a multiple of so they are parallel to each other.

1.2. You can use factorisation to get thus showing that it is a multiple and therefore parallel.

1.3. You can show that therefore being a multiple, so they are parallel.

1.4. Since is not a multiple of , so is not parallel to .

1.5. so they are parallel.

## Q2

Find the magnitude of the following vectors

2.1.

2.2.

2.3.

2.4.

2.5.

2.6.

2.7.

2.8.

2.9.

2.10.

2.11.

2.12.

2.13.

2.14.

## Q3

Find the unit vectors for the following vectors

3.1. Find the magnitude of the vector first, . Then

3.2. Find the magnitude of the vector first, . Then

3.3. Find the magnitude of the vector first, . Then

3.4. Find the magnitude of the vector first, . Then

3.5. Find the magnitude of the vector first, . Then

3.6. Find the magnitude of the vector first, . Then

3.7. Find the magnitude of the vector first, . Then

3.8. Find the magnitude of the vector first, . Then

3.9. Find the magnitude of the vector first, . Then

3.10. Find the magnitude of the vector first, . Then

3.11. Find the magnitude of the vector first, . Then

3.12. Find the magnitude of the vector first, . Then

3.13. Find the magnitude of the vector first, . Then

3.14. Find the magnitude of the vector first, . Then