Answers: Using the quadratic formula

Tom Coleman

Answers to questions relating to the guide on using the quadratic formula.

*These are the answers to* [*Questions: Using the quadratic formula*](../questions/qs-quadraticformula.qmd)*.*

**Please attempt the questions before reading these answers!**

## Answers

### Q1

1.1. The two roots of are and .

1.2. The two roots of are and .

1.3. The two roots of are and .

1.4. The two roots of are and .

1.5. The one distinct root of is .

1.6. The two roots of are and

1.7. The two roots of are and .

1.8. The two roots of are and .

1.9. The two roots of are and

1.10. The two roots of are and .

1.11. The two roots of are and .

1.12. The one distinct root of is , giving as a solution.

1.13. The two roots of are and .

1.14. The two roots of are and , and so there are no real solutions for .

1.15. The one distinct root of is , and so there are no real solutions for as for all real .

1.16. The two distinct roots of are and

### Q2

In [Questions: Introduction to quadratic equations](../questions/qs-introtoquadratics.qmd), you saw that the following expressions are all quadratic equations in disguise. Solve these for the variable indicated.

2.1. The two roots of are and .

2.2. The two roots of are and .

2.3. The one distinct root of is .

2.4. The two roots of are and .

2.5. The two roots of are and .

2.6. The two solutions in for are and . Of these, is a valid solution in , as cannot be negative.