hw-03-quadratic-equation-in-reals

Due: **12/12/2015 at 06:00am EST.**

Students will be able to:

- Solve Quadratic Equations in the Real Domain

Functions and symbols that WeBWorK understands.

Links to some useful WeBWorK pages for students

1. (1 pt) Solve the equation $x^2 - 4x - 32 = 0$ by factoring.

The solution(s) are _____
Note: If there is more than one answer, give them as a comma separated list. If there are none, enter *NONE* .

2. (1 pt) Find all real solutions of the following equation: $4x^2 = 9$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

3. (1 pt) Find all real solutions of the following equation: $x^2 = 225$

Your answer: _____

Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

4. (1 pt) Find all real solutions of the following equation: $x^2 - 121 = 0$

Your answer: _____

Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

5. (1 pt) Find all real solutions of the following equation: $16 - 169x^2 = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

6. (1 pt) Find all real solutions of the following equation: $\frac{7}{17}x^2 = \frac{175}{4352}$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

7. (1 pt) Find all real solutions of the following equation: $\frac{11}{15}x^2 - \frac{1100}{1815} = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

8. (1 pt) Find all real solutions of the following equation: $12x^2 - 19x = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

9. (1 pt) Find all real solutions of the following equation: $\frac{2}{3}x = \frac{14}{5}x^2$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

10. (1 pt) Find all real solutions of the following equation: $x^2 - 10x - 39 = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

11. (1 pt) Find all real solutions of the following equation: $6x^2 - 95x + 75 = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

12. (1 pt) Find all real solutions of the following equation: $30x^2 - 31x + 5 = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

13. (1 pt) Find all real solutions of the following equation: $6x^2 + \frac{13}{4}x + \frac{33}{14} = 5x^2 + \frac{10}{7}x + 7$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

14. (1 pt) Find all real solutions of the following equation: $-17x^2 - 13x + 10 = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

15. (1 pt) Find all real solutions of the following equation: $3x - 2x^2 - 4 = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

16. (1 pt) Find all real solutions of the following equation: $x^2 + 36 = 0$

Your answer: _____

Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

17. (1 pt) Find all real solutions of the following equation: $(x + 14)^2 = 400$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

18. (1 pt) Find all real solutions of the following equation: $(5x - 18)^2 - \frac{256}{25} = 0$

Your answer: _____

Note: you have to use fractions, not decimals in your answer.
Note: if there are several solutions, enter those separated by commas.
Note: if there are no real solutions, enter *no real solutions*

19. (1 pt) A rectangular garden is 5 ft longer than it is wide. Its area is 1050 ft^2. What are its dimensions?

Its width equals _____ and its length equals _____

20. (1 pt) A box with a square base and no top is to be made from a square piece of carboard by cutting 3 in. squares from each corner and folding up the sides. The box is to hold 14700 in^3. How big a piece of cardboard is needed?

Your answer is: _____ in. by _____ in.

21. (1 pt) The surface area of a cube is 62 cm^2. What is the volume of the cube?

Note: Your answer must be a number or a decimal. It may not contain any arithmetic operations.

The volume of the cube is _____ cm^3.