

12.4 Solve Quadratics using Quadratic Formula

ALGEBRA

Write your questions here!



Quadratic Formula: $x =$

Solve.

$$3x^2 + 5x - 7 = 0$$

Practice expressing as a decimal. (Round to nearest hundredth)

$$\frac{9 \pm \sqrt{739}}{6}$$

Practice simplifying radical.

$$\frac{-6 \pm \sqrt{98}}{4}$$

Practice getting awesome answers.

$$\frac{4 \pm \sqrt{64}}{4}$$

Solve. Express your answer in BOTH decimal form and simplest radical form.

$$12d^2 - 4d =$$

TRY IT!

Express in decimal form.

Express in simplest radical.

$$10n^2 + 8n - 1 = 3$$

Special Case

$$-8 = 2t^2 - 7t$$

SUMMARY:

Now,
summarize
your notes
here!



Express in decimal form. (Round to the nearest hundredth)

1. $\frac{6 \pm \sqrt{108}}{4}$

2. $\frac{-3 \pm \sqrt{289}}{8}$

3. $\frac{9 \pm \sqrt{678}}{-6}$

Express in simplest radical form.

4. $\frac{12 \pm \sqrt{180}}{6}$

5. $\frac{6 \pm \sqrt{567}}{4}$

6. $\frac{-6 \pm \sqrt{75}}{2}$

Solve. Express your answer in decimal form. (Round to the nearest hundredth)

7. $2n^2 + 3n - 54 = 0$

8. $-8m^2 + 7m = -4$

9. $4h^2 + 7h = -15$

10. $8x^2 - 2x - 4 = 4x$

Solve. Express your answer in simplest radical form.

11. $0 = 4p^2 + 2p - 18$

12. $5 = -4h^2 - 5h$

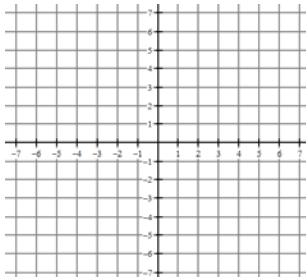
13. $11w^2 - 11w - 1 = 15$

14. $2a^2 - 5 = 9a$

SKILLZ REVIEW

GRAPH

1. $x + 3y = -3$



FACTOR

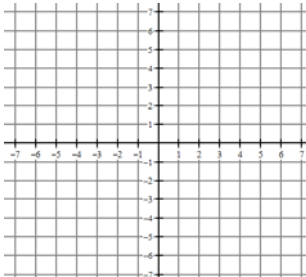
2. $x^2 - 2x - 15$

RADICALS

3. Simplify

$$\sqrt{80}$$

4. $y = x$



5. $2x^3 + 10x^2 - 100x$

6. Simplify

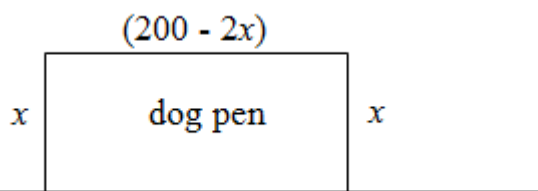
$$\frac{\sqrt{3}}{\sqrt{2}}$$

12.4 Solve Quadratics using Quadratic Formula

Solve using quadratic formula. Express your answer in simplest radical form.

1. $2 - 12p = -4p^2$

2. Mr. Brust is making a fence to keep his dog/children in. He has 200 meters of fencing and plans to use the back of his house as one side of the pen. The picture below shows the pen and the equation models the possible area of the pen.



Equation: $A = x(200 - 2x)$

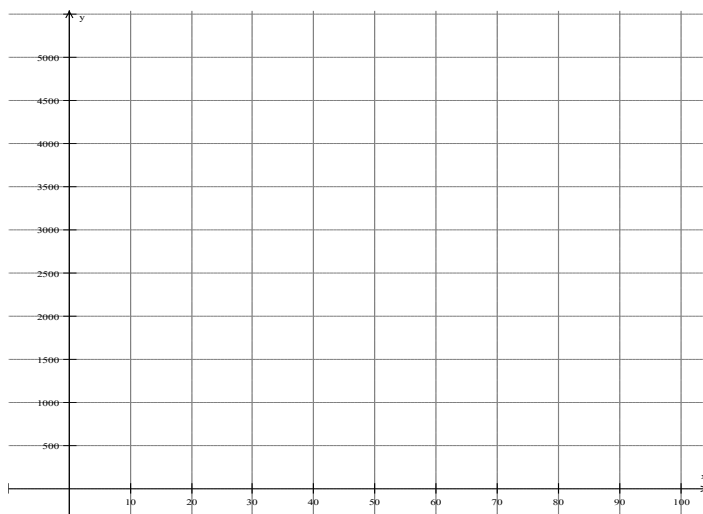
Simplify (Distribute the x and rewrite the equation)

$A =$

- a. Fill in the table

| Fence (meters) | Area (m^2) |
|----------------|----------------|
| 2 | |
| 12 | |
| 86 | |
| | 4200 |

- b. Sketch a rough graph. LABEL AXES!



- c. When will the area be zero?

- d. Set up an equation that shows when the area is $600 m^2$. Solve it.

- e. What is the maximum area of the pen?