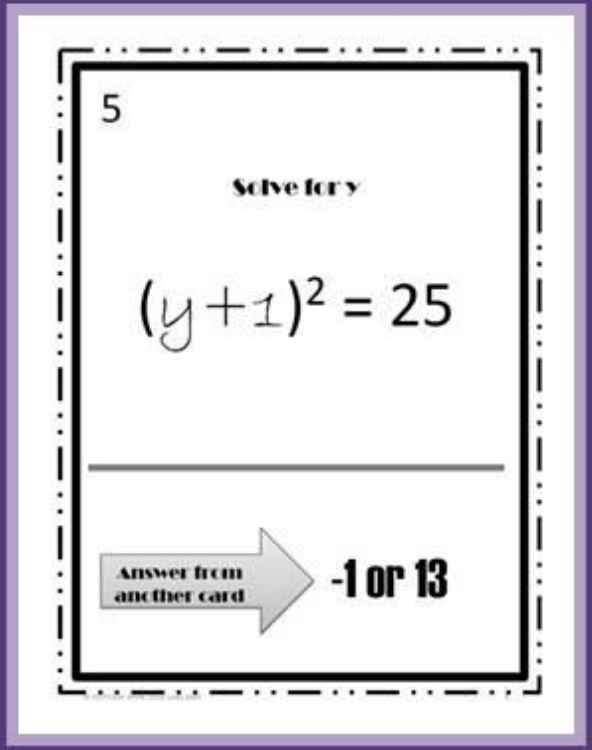
Using the Square Root Property

Quadratic Equations



Walk-Around Activity

Level 1

Walk-Around Activity: Using the Square Root Property

By Caryn White

Table of Contents

Copy Right Informations:

Instructions

This activity is designed to help students with solving quadratic equations using the square root property. This is a beginning to level 1 activity, which means all the square roots are perfect squares.

This activity also gets students up and about. Place the 10 cards on the wall around your room. Students pick any card to begin with. They should work the problem on the page, then students look around the room for a graph that matches theirs. They should continue working until they return to the card they started with.

Included are 2 versions of this activity.

- One with 10 cards for use as a walk-around activity (and an absent student size)
- A shorter version with only 5 cards great for table work, bell work or use as a review.

To help with grading, I have included 2 student answer sheets: One that includes room to show work, and another with just boxes.

Hints and suggestions:

When making copies of the shorter version, I use different colored paper. This allows for easier identification when students misplace a piece.

Possible Uses

- Mid-Lesson or End of Lesson Check for understanding
- Math Station for students that have finished work early
- Test Review
- Homework Alternative
- Bell work

Have Fun. Thanks for your purchase.

1

Solve for m

$$m^2 - 12 = 109$$

Answer from another card

4 or -6

2

Solve for c

$$3c^2 - 17 = 10$$

Answer from another card

3.5

3

Solve for x

$$\frac{1}{2}x^2 = 18$$

Answer from another card

11 or 5

4

Solve for v

$$(v+5)^2 = 4$$

Answer from another card

11 or -11

5

Solve for y

$$(y+1)^2 = 25$$

Answer from another card

-1 or 13

6

Solve for x

$$(x-6)^2 = 49$$

Answer from another card

-4 or 14

7

Solve for x

$$(2x-7)^2 = 0$$

Answer from another card

-7 or -3

8

Solve for y

$$(y-4)^2 = 64$$

Answer from another card

6 or -6

9

Solve for w

$$(w-5)^2 = 81$$

Answer from another card

12 or -4

10

Solve for x

$$3(x-8)^2 = 27$$

Answer from another card

3 or -3

Absent Student Version

Name: _____

1

Solve for m

$m^2 - 12 = 109$

Answer from another card

4 or -6

2

Solve for c

$3c^2 - 17 = 10$

Answer from another card

3.5

3

Solve for x

$\frac{1}{2}x^2 = 18$

Answer from another card

11 or 5

4

Solve for v

$(v+5)^2 = 4$

Answer from another card

11 or -11

5

Solve for y

$(y+1)^2 = 25$

Answer from another card

-1 or 13

6

Solve for x

$(x-6)^2 = 49$

Answer from another card

-4 or 14

7

Solve for x

$(2x-7)^2 = 0$

Answer from another card

-7 or -3

8

Solve for y

$(y-4)^2 = 64$

Answer from another card

6 or -6

9

Solve for w

$(w-5)^2 = 81$

Answer from another card

12 or -4

10

Solve for x

$3(x-8)^2 = 27$

Answer from another card

3 or -3

Student Response Page – Version A1

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Show work below

Student Response Page – Version A2

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Student Response Page

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Student Response Page

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Version B

Version 2

1

Solve for m

$m^2 - 12 = 109$

Answer from another card

4 or -6

4

Solve for v

$(v+5)^2 = 4$

Answer from another card

11 or -11

3

Solve for x

$(2x-7)^2 = 0$

Answer from another card

-7 or -3

2

Solve for c

$3c^2 - 17 = 10$

Answer from another card

3.5

5

Solve for x

$3(x-8)^2 = 27$

Answer from another card

3 or -3

Student Response Page – Version B1

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Show work below

Student Response Page

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Show work below

Student Response Page – Version B2

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Student Response Page

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

Student Response Page

Name _____

Period _____

Pick a card to start with. Write the number in the 1st box. Solve the quadratic equation using the square root property, then find the solution on another card. Write the card number in the 2nd box, and then continue until you reach your first card again.

KEYS

Version A - Set of 10 Cards

1	4	7	2	10	3	8	9	6	5

Note: Students may start with any cards; shift the answer to match the starting point.

Version B: Set of 5 Cards

1	4	3	2	5

1. $m^2 - 12 = 109$ $m^2 = 121$ $\sqrt{(m)^2} = \pm\sqrt{121}$ $m = \pm 11$	2. $3c^2 - 17 = 10$ $3c^2 = 27$ $c^2 = 9$ $\sqrt{(c)^2} = \pm\sqrt{9}$ $c = \pm 3$	3. $\frac{1}{2}x^2 = 18$ $x^2 = 36$ $\sqrt{(x)^2} = \pm\sqrt{6}$ $x = \pm 6$
4. $(v + 5)^2 = 4$ $\sqrt{(v+5)^2} = \pm\sqrt{4}$ $v + 5 = \pm 2$ $v = -5 \pm 2$ $v = -7 \text{ or } -3$	5. $(y + 1)^2 = 25$ $\sqrt{(y+1)^2} = \pm\sqrt{25}$ $y + 1 = \pm 5$ $y = -1 \pm 5$ $y = -6 \text{ or } 4$	6. $(x - 6)^2 = 49$ $\sqrt{(x-6)^2} = \pm\sqrt{49}$ $x - 6 = \pm 7$ $y = 6 \pm 7$ $y = -1 \text{ or } 13$
7. $(2x - 7)^2 = 0$ $\sqrt{(2x-7)^2} = \pm\sqrt{0}$ $2x - 7 = 0$ $2x = 7$ $v = \frac{7}{2}$	8. $(y - 4)^2 = 64$ $\sqrt{(y-4)^2} = \pm\sqrt{64}$ $y - 4 = \pm 8$ $y = 4 \pm 8$ $y = -4 \text{ or } 12$	9. $(w - 5)^2 = 81$ $\sqrt{(w-5)^2} = \pm\sqrt{81}$ $w - 5 = \pm 9$ $w = 5 \pm 9$ $w = -4 \text{ or } 14$
10. $3(x - 8)^2 = 27$ $(x-8)^2 = 9$ $\sqrt{(x-8)^2} = \pm\sqrt{9}$ $x - 8 = \pm 3$ $x = 8 \pm 3$ $x = 5 \text{ or } 11$		

Credits

All graphics were designed by Caryn White except the following.

Graphics on Cover Page