

**Quadratic Equation**

Sheet 1

- 1) Abraham throws a ball from a point 40 m above the ground. The height of the ball from the ground level after 't' seconds is defined by the function  $h(t) = 40t - 5t^2$ . How long will the ball take to hit the ground?

\_\_\_\_\_

- 2) The area of a rectangular pool is  $1260 \text{ ft}^2$ . Find the dimensions of the rectangle, if one side of the pool is 48 ft more than three times the other side.

\_\_\_\_\_

- 3) The sum of the squares of two consecutive natural numbers is 313. Find the numbers.

\_\_\_\_\_

- 4) Two faucets can fill a tank in 1 hour and 20 mins. The time taken by faucet A alone to fill the tank is 2 hours more than faucet B were to fill the same tank separately. How long does it take faucet A alone to fill the tank?

\_\_\_\_\_

- 5) If one side of a square is increased by 10 cm and another side is increased by 5 cm, a rectangle is formed with an area that measures three times the area of the square. Find the length of the side of the square.

\_\_\_\_\_

**Answer key****Quadratic Equation**

Sheet 1

- 1) Abraham throws a ball from a point 40 m above the ground. The height of the ball from the ground level after 't' seconds is defined by the function  $h(t) = 40t - 5t^2$ . How long will the ball take to hit the ground?

**8 seconds**

---

- 2) The area of a rectangular pool is  $1260 \text{ ft}^2$ . Find the dimensions of the rectangle, if one side of the pool is 48 ft more than three times the other side.

**90 ft by 14 ft**

---

- 3) The sum of the squares of two consecutive natural numbers is 313. Find the numbers.

**12 and 13**

---

- 4) Two faucets can fill a tank in 1 hour and 20 mins. The time taken by faucet A alone to fill the tank is 2 hours more than faucet B were to fill the same tank separately. How long does it take faucet A alone to fill the tank?

**2 hours**

---

- 5) If one side of a square is increased by 10 cm and another side is increased by 5 cm, a rectangle is formed with an area that measures three times the area of the square. Find the length of the side of the square.

**10 cm**

---

## Quadratic Equation

Sheet 2

- 1) A rectangular tennis court is 78 ft long and 36 ft wide and is surrounded by a uniform pathway. If the total area of the tennis court along with the pathway measures 3280 ft<sup>2</sup>, find the width of the pathway.

---

- 2) The sum of reciprocals of Donald's age 7 years ago and his age after 5 years is  $\frac{1}{8}$ . How old is Donald now

---

- 3) The legs AB and BC of a right-angled triangle are  $(x - 13)$  cm and  $(x - 12)$  cm respectively. Find the hypotenuse.

---

- 4) Find the two consecutive integers whose product is 675.

---

- 5) A stone is thrown skyward from the top of a building. The distance in ft between the stone and the ground in  $t$  seconds is given by the function  $d = -16t^2 - 4t + 442$ . How long after the stone is thrown is it 430 ft from the ground?

---

# PREVIEW

Access the largest collection of  
worksheets for just **\$19.95** per year!

Members, please  
log in to  
download this  
worksheet.

Log in

Not a member?  
Please sign up to  
gain complete  
access.

Sign up

[www.mathworksheets4kids.com](http://www.mathworksheets4kids.com)

**Answer key****Quadratic Equation**

Sheet 2

- 1) A rectangular tennis court is 78 ft long and 36 ft wide and is surrounded by a uniform pathway. If the total area of the tennis court along with the pathway measures  $3280 \text{ ft}^2$ , find the width of the pathway.

**2 ft**

---

- 2) The sum of reciprocals of Donald's age 7 years ago and his age after 5 years is  $\frac{1}{8}$ . How old is Donald now?

**19 years**

---

- 3) The legs AB and BC of a right-angled triangle are  $(x - 13)$  cm and  $(x - 12)$  cm respectively. Find the hypotenuse.

**12 cm**

---

- 4) Find the two consecutive integers whose product is 675.

**25 and 27**

---

- 5) A stone is thrown skyward from the top of a building. The distance in ft between the stone and the ground in  $t$  seconds is given by the function  $d = -16t^2 - 4t + 442$ . How long after the stone is thrown is it 430 ft from the ground?

**0.75 seconds**

---

# PREVIEW

Access the largest collection of  
worksheets for just **\$19.95** per year!

Members, please  
log in to  
download this  
worksheet.

**Log in**

Not a member?  
Please sign up to  
gain complete  
access.

**Sign up**

[www.mathworksheets4kids.com](http://www.mathworksheets4kids.com)

## Quadratic Equation

Sheet 3

- 1) Robert takes 10 days more than Peter to complete a job. If they work together they will complete the job in 12 days. How long will Peter alone take to finish the job?

---

- 2) The sum of the ages of a father and his son is 42 years. The product of their ages is 185. How old are they?

---

- 3) A rectangular garden is 100 yd long and 50 yd wide. A path is constructed around the garden. Find the area of the path.

---

- 4) The height of a triangle is 80 ft, how long do the sides of the triangle be?

---

- 5) The player hits the ball up in the air with an upward velocity of 18 ft/sec. The equation that gives the height of the ball at any time 't' is  $h(t) = -8t^2 + 18t + 5$ . How long did it take for the ball to hit the ground?

---

# PREVIEW

Access the largest collection of  
worksheets for just **\$19.95** per year!

Members, please  
log in to  
download this  
worksheet.

Log in

Not a member?  
Please sign up to  
gain complete  
access.

Sign up

[www.mathworksheets4kids.com](http://www.mathworksheets4kids.com)

constructed around  
yd<sup>2</sup>.

area of the triangle is

**Answer key****Quadratic Equation**

Sheet 3

- 1) Robert takes 10 days more than Peter to complete a job. If they work together they will complete the job in 12 days. How long will Peter alone take to finish the job?

**20 days**

---

- 2) The sum of the ages of a father and his son is 42 years. The product of their ages is 185. How old are they?

**5 years ; 37 years**

---

- 3) A rectangular garden is 10 yd long and 5 yd wide. A path 0.5 yd wide is constructed around the garden. Find the area of the path.

**0.5 yd**

---

- 4) The height of a triangle is 10 ft and its area is 80 ft<sup>2</sup>, how long is the base?

**10 ft**

---

- 5) The player hits the ball up in the air with an upward velocity of 18 ft/sec. The equation that gives the height of the ball at any time 't' is  $h(t) = -8t^2 + 18t + 5$ . How long did it take for the ball to hit the ground?

**2.5 seconds**

---

**PREVIEW**

Access the largest collection of worksheets for just **\$19.95** per year!

Members, please log in to download this worksheet. **Log in**

Not a member? Please sign up to gain complete access. **Sign up**

[www.mathworksheets4kids.com](http://www.mathworksheets4kids.com)

constructed around yd<sup>2</sup>.

area of the triangle is