| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/QuadCurve2D.Double.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/geom/QuadCurve2D.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/geom/QuadCurve2D.Float.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/geom/QuadCurve2D.Double.html)    [**NO FRAMES**](http://docs.google.com/QuadCurve2D.Double.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#2et92p0) | [FIELD](#tyjcwt) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: [FIELD](#17dp8vu) | [CONSTR](#2jxsxqh) | [METHOD](#1y810tw) |

## **java.awt.geom**

Class QuadCurve2D.Double

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [java.awt.geom.QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html)  
 **java.awt.geom.QuadCurve2D.Double**

**All Implemented Interfaces:** [Shape](http://docs.google.com/java/awt/Shape.html), [Serializable](http://docs.google.com/java/io/Serializable.html), [Cloneable](http://docs.google.com/java/lang/Cloneable.html) **Enclosing class:**[QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html)

public static class **QuadCurve2D.Double**extends [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html)implements [Serializable](http://docs.google.com/java/io/Serializable.html)

A quadratic parametric curve segment specified with double coordinates.

**Since:** 1.2 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#java.awt.geom.QuadCurve2D.Double)

| **Nested Class Summary** | |
| --- | --- |

| **Nested classes/interfaces inherited from class java.awt.geom.**[**QuadCurve2D**](http://docs.google.com/java/awt/geom/QuadCurve2D.html) |
| --- |
| [QuadCurve2D.Double](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html), [QuadCurve2D.Float](http://docs.google.com/java/awt/geom/QuadCurve2D.Float.html) |

| **Field Summary** | |
| --- | --- |
| double | [**ctrlx**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#ctrlx)            The X coordinate of the control point of the quadratic curve segment. |
| double | [**ctrly**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#ctrly)            The Y coordinate of the control point of the quadratic curve segment. |
| double | [**x1**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#x1)            The X coordinate of the start point of the quadratic curve segment. |
| double | [**x2**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#x2)            The X coordinate of the end point of the quadratic curve segment. |
| double | [**y1**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#y1)            The Y coordinate of the start point of the quadratic curve segment. |
| double | [**y2**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#y2)            The Y coordinate of the end point of the quadratic curve segment. |

| **Constructor Summary** | |
| --- | --- |
| [**QuadCurve2D.Double**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#QuadCurve2D.Double())()            Constructs and initializes a QuadCurve2D with coordinates (0, 0, 0, 0, 0, 0). |
| [**QuadCurve2D.Double**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#QuadCurve2D.Double(double,%20double,%20double,%20double,%20double,%20double))(double x1, double y1, double ctrlx, double ctrly, double x2, double y2)            Constructs and initializes a QuadCurve2D from the specified double coordinates. |

| **Method Summary** | |
| --- | --- |
| [Rectangle2D](http://docs.google.com/java/awt/geom/Rectangle2D.html) | [**getBounds2D**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getBounds2D())()            Returns a high precision and more accurate bounding box of the Shape than the getBounds method. |
| [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) | [**getCtrlPt**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getCtrlPt())()            Returns the control point. |
| double | [**getCtrlX**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getCtrlX())()            Returns the X coordinate of the control point in double precision. |
| double | [**getCtrlY**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getCtrlY())()            Returns the Y coordinate of the control point in double precision. |
| [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) | [**getP1**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getP1())()            Returns the start point. |
| [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) | [**getP2**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getP2())()            Returns the end point. |
| double | [**getX1**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getX1())()            Returns the X coordinate of the start point in double in precision. |
| double | [**getX2**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getX2())()            Returns the X coordinate of the end point in double precision. |
| double | [**getY1**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getY1())()            Returns the Y coordinate of the start point in double precision. |
| double | [**getY2**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#getY2())()            Returns the Y coordinate of the end point in double precision. |
| void | [**setCurve**](http://docs.google.com/java/awt/geom/QuadCurve2D.Double.html#setCurve(double,%20double,%20double,%20double,%20double,%20double))(double x1, double y1, double ctrlx, double ctrly, double x2, double y2)            Sets the location of the end points and control point of this curve to the specified double coordinates. |

| **Methods inherited from class java.awt.geom.**[**QuadCurve2D**](http://docs.google.com/java/awt/geom/QuadCurve2D.html) |
| --- |
| [clone](http://docs.google.com/java/awt/geom/QuadCurve2D.html#clone()), [contains](http://docs.google.com/java/awt/geom/QuadCurve2D.html#contains(double,%20double)), [contains](http://docs.google.com/java/awt/geom/QuadCurve2D.html#contains(double,%20double,%20double,%20double)), [contains](http://docs.google.com/java/awt/geom/QuadCurve2D.html#contains(java.awt.geom.Point2D)), [contains](http://docs.google.com/java/awt/geom/QuadCurve2D.html#contains(java.awt.geom.Rectangle2D)), [getBounds](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getBounds()), [getFlatness](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getFlatness()), [getFlatness](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getFlatness(double%5B%5D,%20int)), [getFlatness](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getFlatness(double,%20double,%20double,%20double,%20double,%20double)), [getFlatnessSq](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getFlatnessSq()), [getFlatnessSq](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getFlatnessSq(double%5B%5D,%20int)), [getFlatnessSq](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getFlatnessSq(double,%20double,%20double,%20double,%20double,%20double)), [getPathIterator](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getPathIterator(java.awt.geom.AffineTransform)), [getPathIterator](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getPathIterator(java.awt.geom.AffineTransform,%20double)), [intersects](http://docs.google.com/java/awt/geom/QuadCurve2D.html#intersects(double,%20double,%20double,%20double)), [intersects](http://docs.google.com/java/awt/geom/QuadCurve2D.html#intersects(java.awt.geom.Rectangle2D)), [setCurve](http://docs.google.com/java/awt/geom/QuadCurve2D.html#setCurve(double%5B%5D,%20int)), [setCurve](http://docs.google.com/java/awt/geom/QuadCurve2D.html#setCurve(java.awt.geom.Point2D%5B%5D,%20int)), [setCurve](http://docs.google.com/java/awt/geom/QuadCurve2D.html#setCurve(java.awt.geom.Point2D,%20java.awt.geom.Point2D,%20java.awt.geom.Point2D)), [setCurve](http://docs.google.com/java/awt/geom/QuadCurve2D.html#setCurve(java.awt.geom.QuadCurve2D)), [solveQuadratic](http://docs.google.com/java/awt/geom/QuadCurve2D.html#solveQuadratic(double%5B%5D)), [solveQuadratic](http://docs.google.com/java/awt/geom/QuadCurve2D.html#solveQuadratic(double%5B%5D,%20double%5B%5D)), [subdivide](http://docs.google.com/java/awt/geom/QuadCurve2D.html#subdivide(double%5B%5D,%20int,%20double%5B%5D,%20int,%20double%5B%5D,%20int)), [subdivide](http://docs.google.com/java/awt/geom/QuadCurve2D.html#subdivide(java.awt.geom.QuadCurve2D,%20java.awt.geom.QuadCurve2D)), [subdivide](http://docs.google.com/java/awt/geom/QuadCurve2D.html#subdivide(java.awt.geom.QuadCurve2D,%20java.awt.geom.QuadCurve2D,%20java.awt.geom.QuadCurve2D)) |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Field Detail** |
| --- |

### x1

public double **x1**

The X coordinate of the start point of the quadratic curve segment.

**Since:** 1.2

### y1

public double **y1**

The Y coordinate of the start point of the quadratic curve segment.

**Since:** 1.2

### ctrlx

public double **ctrlx**

The X coordinate of the control point of the quadratic curve segment.

**Since:** 1.2

### ctrly

public double **ctrly**

The Y coordinate of the control point of the quadratic curve segment.

**Since:** 1.2

### x2

public double **x2**

The X coordinate of the end point of the quadratic curve segment.

**Since:** 1.2

### y2

public double **y2**

The Y coordinate of the end point of the quadratic curve segment.

**Since:** 1.2

| **Constructor Detail** |
| --- |

### QuadCurve2D.Double

public **QuadCurve2D.Double**()

Constructs and initializes a QuadCurve2D with coordinates (0, 0, 0, 0, 0, 0).

**Since:** 1.2

### QuadCurve2D.Double

public **QuadCurve2D.Double**(double x1,  
 double y1,  
 double ctrlx,  
 double ctrly,  
 double x2,  
 double y2)

Constructs and initializes a QuadCurve2D from the specified double coordinates.

**Parameters:**x1 - the X coordinate of the start pointy1 - the Y coordinate of the start pointctrlx - the X coordinate of the control pointctrly - the Y coordinate of the control pointx2 - the X coordinate of the end pointy2 - the Y coordinate of the end point**Since:** 1.2

| **Method Detail** |
| --- |

### getX1

public double **getX1**()

Returns the X coordinate of the start point in double in precision.

**Specified by:**[getX1](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getX1()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**the X coordinate of the start point.**Since:** 1.2

### getY1

public double **getY1**()

Returns the Y coordinate of the start point in double precision.

**Specified by:**[getY1](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getY1()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**the Y coordinate of the start point.**Since:** 1.2

### getP1

public [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) **getP1**()

Returns the start point.

**Specified by:**[getP1](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getP1()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**a Point2D that is the start point of this QuadCurve2D.**Since:** 1.2

### getCtrlX

public double **getCtrlX**()

Returns the X coordinate of the control point in double precision.

**Specified by:**[getCtrlX](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getCtrlX()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**X coordinate the control point**Since:** 1.2

### getCtrlY

public double **getCtrlY**()

Returns the Y coordinate of the control point in double precision.

**Specified by:**[getCtrlY](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getCtrlY()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**the Y coordinate of the control point.**Since:** 1.2

### getCtrlPt

public [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) **getCtrlPt**()

Returns the control point.

**Specified by:**[getCtrlPt](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getCtrlPt()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**a Point2D that is the control point of this Point2D.**Since:** 1.2

### getX2

public double **getX2**()

Returns the X coordinate of the end point in double precision.

**Specified by:**[getX2](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getX2()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**the x coordiante of the end point.**Since:** 1.2

### getY2

public double **getY2**()

Returns the Y coordinate of the end point in double precision.

**Specified by:**[getY2](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getY2()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**the Y coordinate of the end point.**Since:** 1.2

### getP2

public [Point2D](http://docs.google.com/java/awt/geom/Point2D.html) **getP2**()

Returns the end point.

**Specified by:**[getP2](http://docs.google.com/java/awt/geom/QuadCurve2D.html#getP2()) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Returns:**a Point object that is the end point of this Point2D.**Since:** 1.2

### setCurve

public void **setCurve**(double x1,  
 double y1,  
 double ctrlx,  
 double ctrly,  
 double x2,  
 double y2)

Sets the location of the end points and control point of this curve to the specified double coordinates.

**Specified by:**[setCurve](http://docs.google.com/java/awt/geom/QuadCurve2D.html#setCurve(double,%20double,%20double,%20double,%20double,%20double)) in class [QuadCurve2D](http://docs.google.com/java/awt/geom/QuadCurve2D.html) **Parameters:**x1 - the X coordinate of the start pointy1 - the Y coordinate of the start pointctrlx - the X coordinate of the control pointctrly - the Y coordinate of the control pointx2 - the X coordinate of the end pointy2 - the Y coordinate of the end point**Since:** 1.2

### getBounds2D

public [Rectangle2D](http://docs.google.com/java/awt/geom/Rectangle2D.html) **getBounds2D**()

Returns a high precision and more accurate bounding box of the Shape than the getBounds method. Note that there is no guarantee that the returned [Rectangle2D](http://docs.google.com/java/awt/geom/Rectangle2D.html) is the smallest bounding box that encloses the Shape, only that the Shape lies entirely within the indicated Rectangle2D. The bounding box returned by this method is usually tighter than that returned by the getBounds method and never fails due to overflow problems since the return value can be an instance of the Rectangle2D that uses double precision values to store the dimensions.

**Specified by:**[getBounds2D](http://docs.google.com/java/awt/Shape.html#getBounds2D()) in interface [Shape](http://docs.google.com/java/awt/Shape.html) **Returns:**an instance of Rectangle2D that is a high-precision bounding box of the Shape.**Since:** 1.2 **See Also:**[Shape.getBounds()](http://docs.google.com/java/awt/Shape.html#getBounds())

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/QuadCurve2D.Double.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/awt/geom/QuadCurve2D.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/geom/QuadCurve2D.Float.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/geom/QuadCurve2D.Double.html)    [**NO FRAMES**](http://docs.google.com/QuadCurve2D.Double.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#2et92p0) | [FIELD](#tyjcwt) | [CONSTR](#3dy6vkm) | [METHOD](#1t3h5sf) | DETAIL: [FIELD](#17dp8vu) | [CONSTR](#2jxsxqh) | [METHOD](#1y810tw) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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