1. 矩阵乘法加法计算器：[矩阵乘法计算器 (reshish.com)](https://matrix.reshish.com/zh/multiplication.php)

2. homogeneous transformation齐次坐标：<https://blog.csdn.net/zx3517288/article/details/79154036>

3. 矩阵表示Translation / Rotation / Scaling

A picture containing calendar

Description automatically generated

4. 二次和三次贝塞尔曲线

Chart

Description automatically generated with low confidence

ctx.quadraticCurveTo( p1x, p1y, p2x, p2y )

Diagram

Description automatically generated

ctx.bezierCurveTo( p1x, p1y, p2x, p2y, p3x, p3y )

两个函数的转化公式：

Graphical user interface, text, application, email

Description automatically generated

<https://stackoverflow.com/questions/3162645/convert-a-quadratic-bezier-to-a-cubic-one/3162732#3162732>

workbook里说考试会考的题型

1.

Table

Description automatically generated with medium confidence

**Workbook**

SVG画曲线

Text

Description automatically generated

End of Week Survey 2

1.运行结果

Text

Description automatically generated

产出：



First a is 0因为Graphical user interface, text, application

Description automatically generated

Second a is 2因为Graphical user interface, text, application, chat or text message

Description automatically generated

2.

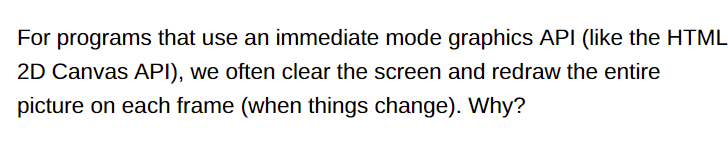
Graphical user interface, text, application

Description automatically generated

Text, timeline

Description automatically generated

3.



A picture containing text, indoor, screenshot

Description automatically generated

4.

Graphical user interface, text, application, email

Description automatically generated

5.

A picture containing logo

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

6.

Raster display

Logo

Description automatically generated with low confidence

Timeline

Description automatically generated with low confidence

7.

A picture containing graphical user interface

Description automatically generated

A picture containing text

Description automatically generated

Text

Description automatically generated

Odd-even rule vs nonzero winding number rule

A picture containing text

Description automatically generated

“nonzero规则” 是不是0，如果不是0则内部，填充；如果是0则外部，不填充。

“evenodd规则”是不是奇数，如果是是奇数则内部，填充；如果是偶数则外部，不填充。

[非零环绕数规则和奇-偶规则（Non-Zero Winding Number Rule&&Odd-even Rule）\_freshForIphone的专栏-CSDN博客\_非零环绕数规则](https://blog.csdn.net/freshforiphone/article/details/8273023)

8.

Double buffering allow us achieve:

Graphical user interface, text

Description automatically generated

End of Week Survey 4

1.

A picture containing icon

Description automatically generated

Graphical user interface, text

Description automatically generated

2.

Graphical user interface, text

Description automatically generated with medium confidence

False

3.

图形和对应code

A picture containing square

Description automatically generated

Text, letter

Description automatically generated

A picture containing shape

Description automatically generated

Text, letter

Description automatically generated

和Text, letter

Description automatically generated

4.

homogeneous transformation

A translation by 5 in the x direction and 10 in the y direction:

A picture containing text, clock

Description automatically generated

A reflection about the Y axis:

A picture containing calendar

Description automatically generated

A rotation by -90 degrees (-PI/2 radians)

A picture containing text, clock

Description automatically generated

A screenshot of a computer

Description automatically generated with low confidence

5.

Text

Description automatically generated with medium confidence

6.

Text

Description automatically generated

the position of the moveTo command (the start of the line) would be 10 "canvas pixels" to the right (of the left edge of the canvas)

 the position of the moveTo command (the start of the line) would be 10 "canvas pixels" down from the top

因为The second context.translate(10,0) (on line 4) moves the position 10 "canvas pixels" down from the top, because context.rotate(Math.PI/2) makes X-axis pointing down.

The segment goes from (10, 0) to (10, 10), so it is vertical.

7.

Graphical user interface, text, application, email

Description automatically generated

8.

Scale和translate

Graphical user interface

Description automatically generated

End of Week Survey 5

1.

A picture containing application

Description automatically generated

2.

Graphical user interface, text

Description automatically generated

Table

Description automatically generated

3.

Text

Description automatically generated

Graphical user interface, text

Description automatically generated

4.

Graphical user interface, text, application

Description automatically generated

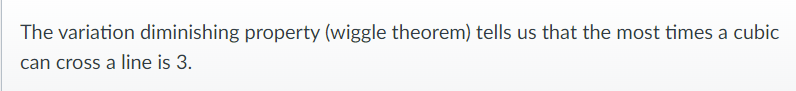
A picture containing graphical user interface

Description automatically generated

5.

Text

Description automatically generated



6.

Graphical user interface, text, application, email

Description automatically generated

Text

Description automatically generated

7.

A picture containing chart

Description automatically generated

Graphical user interface, text, application

Description automatically generated

8.

Text, letter

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated