LAB 01 QUESTIONS

QUESTION 1

Open the SlopeApplication.jar activity. Plot the points P1=(1,3) and P2=(3,-1). Report the value of the slope m.

- ○ A. -2
- ○ B. -1
- ○ C. 0
- ○ D. 1
- ○ E. 2
- ○ F. 3

1 points

QUESTION 2

Refer the SlopeApplication.jar activity. Suppose P1 is a point in Q II and P2 is a point in Q IV. What can you conclude about the value of m?

- ○ A. m has to be positive
- ○ B. m has to be negative
- ○ C. m could be positive or negative

1 points

QUESTION 3

Refer to the SlopeApplication.jar activity. What happens to the value of m when P1 and P2 have different x coordinates but the same y coordinate? (You can drag the points with your mouse to experiment.)

- ○ A. The slope is 0
- ○ B. The slope is 1
- ○ C. The slope is undefined

1 points

QUESTION 4

Download and open the Exam_grapher.jar activity. For the f(x)= field, enter 3*x+4. Examine the graph to determine f(-1).

- ○ -2
- ○ -1
- ○ 0

○ 1

○ 2

QUESTION 5

Use the Exam_grapher.jar activity. Keep f(x)=3*x+4, but this time use the table of function values on the right to enter x=1 and find f(x).

○ 4

○ 5

○ 7

○ 8

○ 10

QUESTION 6

Refer to the Exam_grapher.jar activity. Keep f(x)=3*x+4. Click on the "Drag box Zoom in" radio button and drag on the graphing window to make a square with upper left corner (-2,2) and lower right corner (2,-2). What is the effect on the graph that is displayed? (Note that you can return to the original viewing window by clicking on the "o" in the middle of the navigation rose.

○ A. It shifts the x coordinates of the graph up or down

○ B. It shifts the x coordinates of the graph left or right

○ C. It shifts the y coordinates of the graph up or down

○ D. It shifts the y coordinates of the graph left or right

○ E. It changes the scale of both axes, so the new viewing window is smaller.

QUESTION 7

Use the Exam_grapher.jar activity. Graph $f(x) = \dfrac{4x^2}{x^2+1}$ and report on its symmetry. (Observe the symmetry both on the grapher and in the table.)

○ A. The graph is symmetric with respect to the x axis

○ B. The graph is symmetric with respect to the y axis

○ C. The graph is symmetric with respect to the origin

QUESTION 8

Use the Exam_grapher.jar activity. Suppose $f(x)=(x^3 - 1)/5$. Use the table part of the utility to find the value reported for $f(Pi/2)$. Round your answer to the nearest hundredth. (Notice that the input has to be "Pi" and not "pi" to get the correct value. The grapher parses "pi" as an unknown variable with initial value 0.)

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QUESTION 9

Use the Exam_grapher.jar activity. Set f(x)=1/x and choose the automatic x entries option for the table. There is a bug in the parser that makes one of the table entries in error. Study the graph and the table to find the mistake.

  ○   A. The decimal values of the entries are truncated

  ○   B. +Infinity is not a number

  ○   C. The asymptote suggests both +Infinity and -Infinity as limiting values

  ○   D. g(x) is identically zero

  ○   E. There should be no negative values in the function table.