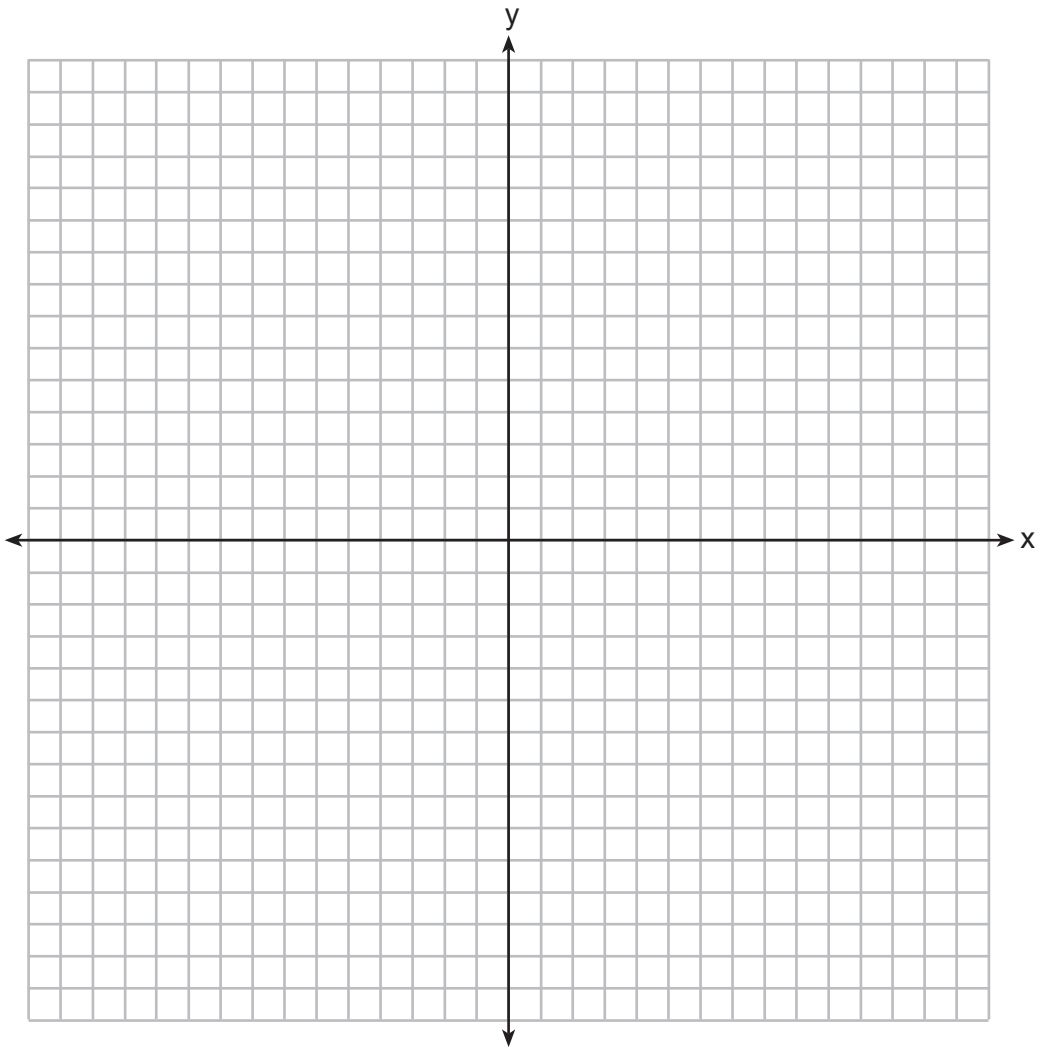
26 Given $g(x) = x^3 + 2x^2 - x$, evaluate $g(-3)$.

Part III

Answer all 4 questions in this part. Each correct answer will receive 4 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. Utilize the information provided for each question to determine your answer. Note that diagrams are not necessarily drawn to scale. For all questions in this part, a correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [16]

31 Graph the following system of equations on the set of axes below.

$$y = x^2 - 3x - 6$$
$$y = x - 1$$



State the coordinates of all solutions.

32 The table below shows the amount of money a popular movie earned, in millions of dollars, during its first six weeks in theaters.

Week (x)	1	2	3	4	5	6
Dollars Earned, in Millions (y)	185	150	90	50	25	5

Write the linear regression equation for this data set, rounding all values to the *nearest hundredth*.

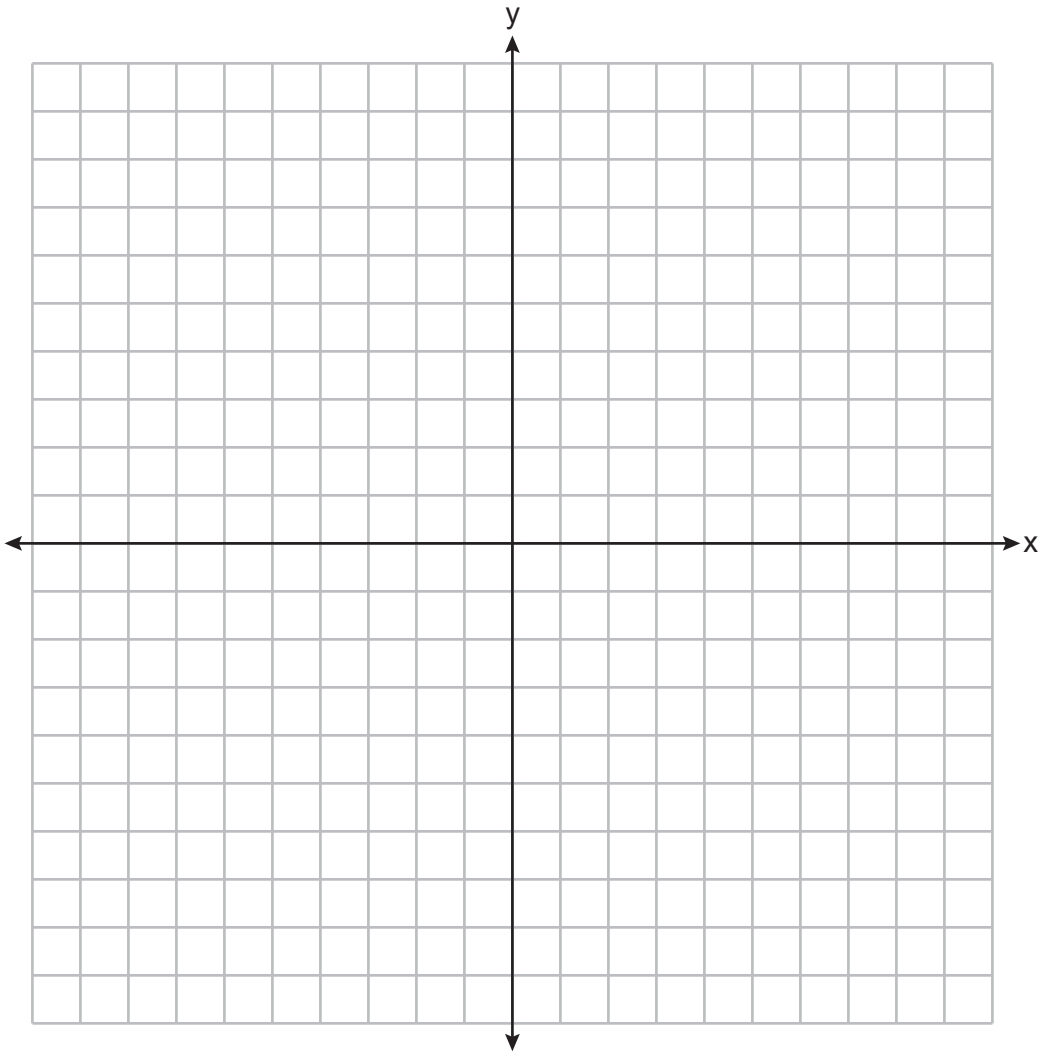
State the correlation coefficient to the *nearest hundredth*.

State what this correlation coefficient indicates about the linear fit of the data.

33 Use the quadratic formula to solve the equation $3x^2 - 10x + 5 = 0$. Express the answer in simplest radical form.

34 Graph the system of inequalities on the set of axes below.

$$3y + 2x \leq 15$$
$$y - x > 1$$



State the coordinates of a point in the solution to this system. Justify your answer.

Part IV

Answer the question in this part. A correct answer will receive 6 credits. Clearly indicate the necessary steps, including appropriate formula substitutions, diagrams, graphs, charts, etc. Utilize the information provided to determine your answer. Note that diagrams are not necessarily drawn to scale. A correct numerical answer with no work shown will receive only 1 credit. All answers should be written in pen, except for graphs and drawings, which should be done in pencil. [6]

35 Courtney went to a coffee shop to purchase lattes and donuts for her friends. One day she spent a total of \$15.50 on four lattes and two donuts. The next day she spent a total of \$18.10 on three lattes and five donuts. All prices included tax.

If x represents the cost of one latte and y represents the cost of one donut, write a system of equations that can be used to model this situation.

Courtney thinks that one latte costs \$2.75 and one donut costs \$2.25.
Is Courtney correct? Justify your answer.

Use your equations to determine algebraically the exact cost of one latte and the exact cost of one donut.