Answer key

QUESTION #34

[11]

Of the four linear functions represented below, which has the greatest rate of change?

(A) A number, y, is two less than twice a number, x.

$y = 2x - 2$

$\boxed{m = 2}$

(B) $3y - 4x = 3$

$3y = 4x + 3$

$\frac{3y}{3} = \frac{4x + 3}{3}$

$y = \frac{4}{3}x + 1$

$\boxed{m = 1.3}$

(C)

x	h(x)
-6	-10
-3	-3

$m = \frac{14}{...}$ $m = 2.3$

$m = \frac{5}{2}$

$\boxed{m = 2.5}$

(D) greatest
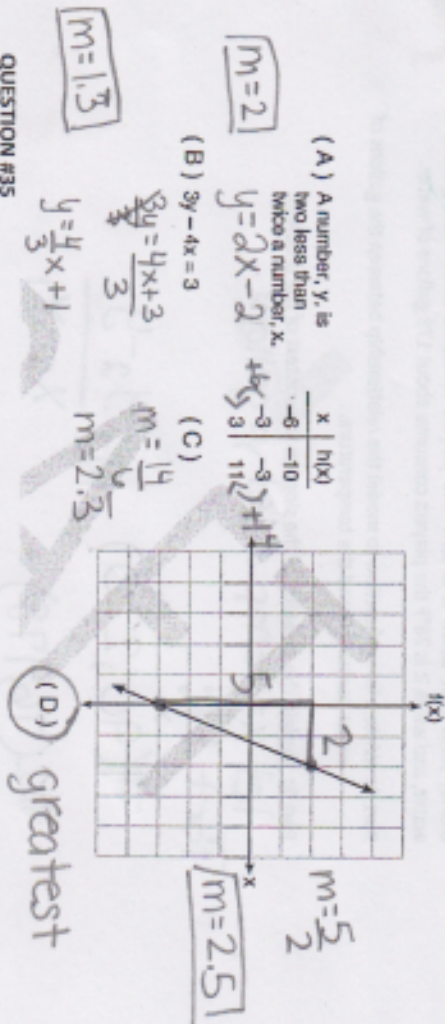
QUESTION #35

Which phrase describes a nonlinear function?

A the area of a circle as a function of the radius

B the perimeter of a square as a function of the side length

C the cost of gasoline as a function of the number of gallons purchased

D the distance traveled by a car moving at constant speed as a function of time

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QUESTION #36

Which equation represents a linear function?

$y = 4x^{-1}$

A $y = \frac{4}{x} + 1$ C $y = \sqrt[3]{x} + 1$

B $y = x^2 + 2$ (D) $y = -\frac{2}{3}x - \frac{1}{2}$

No exponent

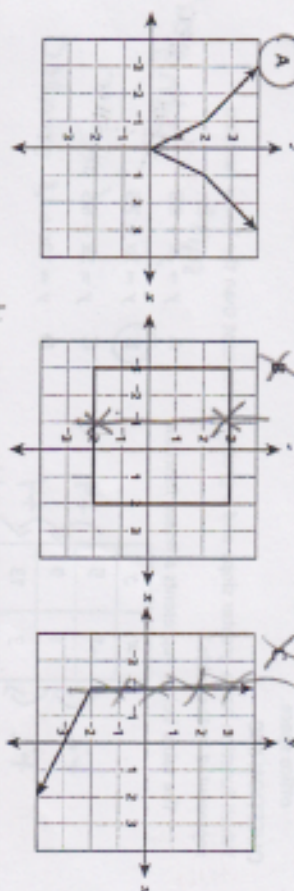
QUESTION #37

EYESIGHT STUDY

A researcher studied the eyesight of people at different ages. She calculated a vision score for each person in the study and plotted the data on the graph below.

Vision Score vs Age (years)
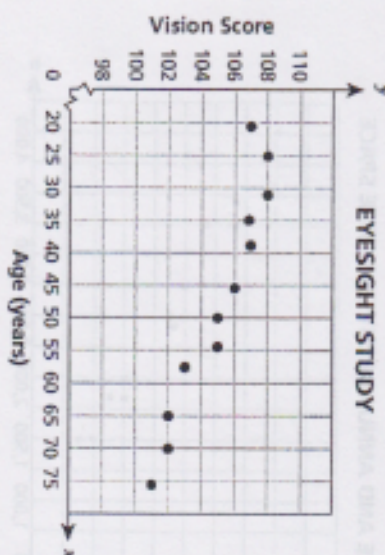
The researcher used the line $y = -0.1x + 110$ to model the data. When she substituted the value $x = 65$ into this equation, what did the result tell her?

A the exact value for the vision score of a 65-year-old

(B) the predicted value for the vision score of a 65-year-old

C the minimum possible value for the vision score of a 65-year-old

D the maximum possible value for the vision score of a 65-year-old

Don't need this ✓

$y = -0.1(65) + 110$

$y = -6.5 + 110$

$y = 103.5$

QUESTION #38 – Which graph represents a function

A

passes vertical line test