

**A.16 The student will, given a set of data points, write an equation for a line of best fit, using the median fit method, and use the equation to make predictions.**

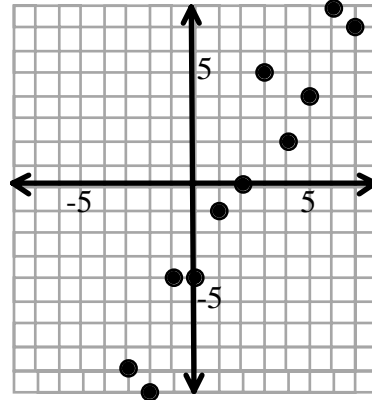
1. Using the median fit method, which equation most likely represents the line of best fit for the data shown in the scatterplot?

a.  $y = 2x - 4$

b.  $y = 4 - x$

c.  $y = \frac{1}{2}x - 4$

d.  $y = \frac{1}{2}x$



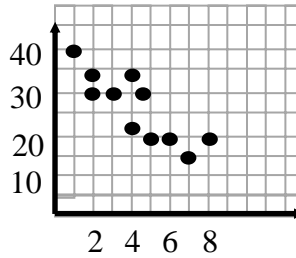
2. Which equation represents the median line of fit for the data displayed in the scatterplot?

f.  $y = -4x + 50$

g.  $y = -x + 44$

h.  $y = -3\frac{1}{3}x + 39\frac{1}{6}$

j.  $y = -2\frac{6}{7}x + 44$



3. According to this information, what is the best prediction of the shoe size of a student who is 72 inches tall?

<b>Student</b>	1	2	3	4	5	6	7	8	9	10
<b>Height in Inches</b>	62	63	65	66	68	69	69	70	70	71
<b>Shoe Size</b>	7	6	8.5	8	7.5	10	8.5	9.5	9	10.5

a. Between 4 and 5

b. Between 6 and 7

c. Between 8 and 9

d. Between 10 and 11

e. Between 12 and 13

4. The matrix shown represents the total graduate enrollment in education programs at the College of William and Mary in Williamsburg, Virginia, from 1993 through 1997. The equation  $y = 11.7x + 341$  can be used to predict the enrollment  $y$  for  $x$  years after 1993. Using this equation, what would you predict for the enrollment in the graduate school of education for the year 2000?

	1993	1994	1995	1996	1997
Enrollment	[ 340	353	386	373	390 ]

f. 411

g. 423

h. 435

j. 458