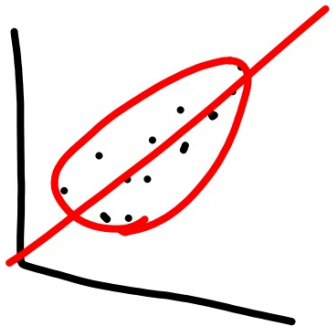
Algebra 1 4.5

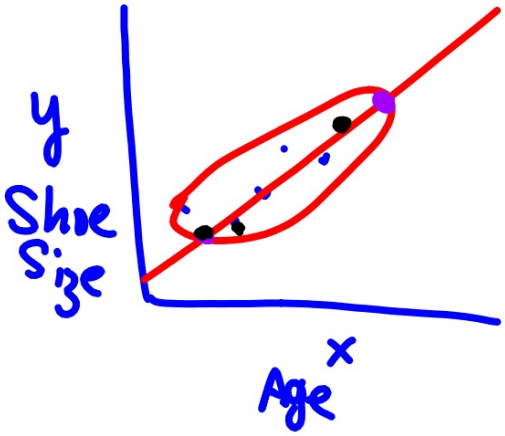
Create scatterplots from data

Write equations of best-fit lines from data

slope-intercept form

activity: whiteboards





(x, y)

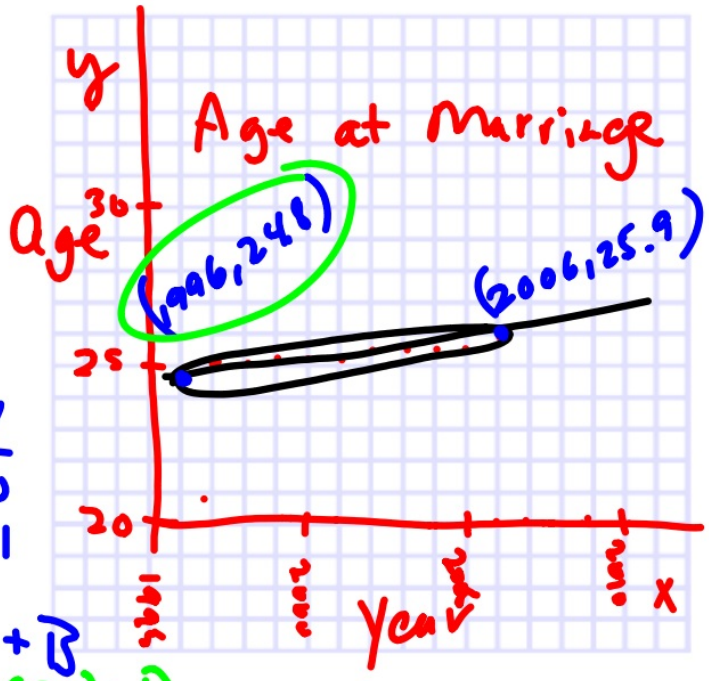
3. CCSS **SENSE-MAKING** The table shows the median age of females when they were first married.

x y

Year	Age
1996	24.8
1997	25.0
1998	25.0
1999	25.1
2000	25.1
2001	25.1
2002	25.3
2003	25.3
2004	25.3
2005	25.5
2006	25.9

Source: U.S. Bureau of Census

1. Make a scatterplot
2. Draw a line of fit
3. Write the equation of the line of fit.
4. Explain.



$m = \frac{1.1}{10}$

$m = 0.11$

$y = 0.11x + B$

$24.8 = 0.11(1996) + B$

$24.8 = 219.56 + B$

$-219.56 \quad -219.56$

$-194.76 = B$

$y = 0.11x - 194.76$

$age = 0.11year - 194.76$

$age = 27.4$ (2020)

10. CCSS **SENSE-MAKING** The Body Mass Index (BMI) is a measure of body fat using height and weight. The heights and weights of twelve men with normal BMI are given in the table at the right.

Height (in.)	Weight (lb)
62	115
63	124
65	120
67	134
67	140
68	138
68	144
68	152
69	147
72	155
73	168
73	166

1. Make a scatterplot
2. Draw a line of fit
3. Write the equation of the line of fit.
4. Explain.

1. Make a scatterplot
2. Draw a line of (best) fit
3. Write the equation of the line of fit.
4. Explain.

11 **GEYSERS** The time to the next eruption of Old Faithful can be predicted by using the duration of the current eruption.

Duration (min)	1.5	2	2.5	3	3.5	4	4.5	5
Interval (min)	48	55	70	72	74	82	93	100

1. Make a scatterplot
2. Draw a line of (best) fit
3. Write the equation of the line of fit.
4. Explain.

Real-World Example 1 Best-Fit Line

MOVIES The table shows the amount of money made by movies in the United States.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Income ($ billion)	7.48	8.13	9.19	9.35	9.27	8.95	9.25	9.65	9.85	10.21

WB prac 4.5 1-4
skills 4.5 1-4