

## Regression equation

	High temp. in °C $x$	Iced tea orders $y$	$x - \bar{x}$	$y - \bar{y}$	$(x - \bar{x})^2$	$(y - \bar{y})^2$	$(x - \bar{x})(y - \bar{y})$
22nd (Mon.)	29	77	-0.4	2	0.16	4	-0.8
23rd (Tues.)	28	62	-1.4	-13	1.96	169	-18.2
24th (Wed.)	34	93	4.6	18	21.16	324	82.8
25th (Thurs.)	31	84	1.6	9	2.56	81	14.4
26th (Fri.)	25	59	-4.4	-16	19.36	256	-70.4
Sum	147	375			45.2	834	185
Average	29.4 $\downarrow \bar{x}$	75 $\downarrow \bar{y}$			$\downarrow S_{xx}$	$\downarrow S_{yy}$	$\downarrow S_{xy}$

$$\bar{x} = \frac{\sum x}{n} = \frac{147}{5} = 29.4$$

$$\bar{y} = \frac{\sum y}{n} = \frac{375}{5} = 75$$

หาค่าเฉลี่ยของ  $x$  กับ  $y$

$$a = \frac{S_{xy}}{S_{xx}} = \frac{185}{45.2} = 4.09292 \quad a \text{ คือ ความชันของเส้น (Slope)}$$

$$b = \bar{y} - \bar{x}a = 75 - (29.4)(4.09292) = -45.33 \quad b \text{ คือ ค่าตัดแกน y (Intercept)}$$

Regression equation is  $y = 4.09x - 45.33$