HW: Worksheet/25, 27-33, 36

Warm up:

Find the mean, median, mode, and range of the data set.

14, 42, 35, 33, 22, 29, 27, 38, 102, 41, 33, 35

14, 22, 27, 29, 33, 33, 35, 35, 38, 41, 42, 102

mean = $\frac{451}{12} = 37.58333 \approx 37.58$

median = $\frac{33+35}{2} = 34$

mode = 33 and 35

range = 102 − 14 = 88

102 is an outlier

14, 42, 35, 33, 22, 29, 27, 38, 102, 41, 33, 35

Is the mean the best way to represent this data? Why or why not?

no
because of the
outlier

When are these most useful?

mean	when there are no outliers
median	there are outliers no big gaps in the middle of the data
mode	data has many identical numbers
range	describing the spread of the data

The following are test scores from the last science test. Which measure of central tendency would best describe the data? Mean, median or mode?

median

98, 89, 85, 99, 87, 91, 100, 82, 21, 79, 95

21, 79, 82, 85, 87, 89, 91, 95, 98, 99, 100

mean = $84.18\overline{18} \approx 84.18$

median = 89

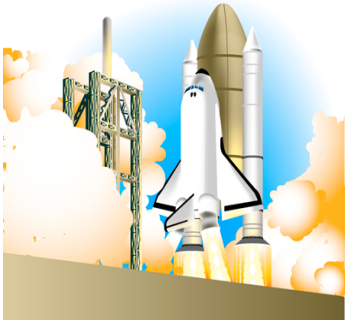
mode = no mode

Question from last night's homework:

Countries with people sent to space

mode

267, 1, 9, 8, 1, 1, 1,
1, 1, 97, 1, 1, 1, 3,
1, 1, 2, 1, 11, 2, 1,
1, 5, 1, 1, 1, 1



Which measure best describes the data: mean, median, or mode?

The following are test scores from two classes at West High School. Using our measures of central tendency, what can we say about the two classes?

mean = 81.5
median = 91.5
mode = 100

First Period

14, 32, 81, 88, 89, 87, 98, 94, 99, 96, 100, 100

14, 32, 81, 87, 88, 89, 94, 96, 98, 99, 100, 100

Second Period

72, 89, 85, 81, 82, 87, 86, 84, 83, 87, 83, 88

72, 81, 82, 83, 83, 84, 85, 86, 87, 87, 88, 89

mean = 83.92
median = 84.5
mode = 83 and 87

(5) 3.5% ↓ $100 - 3.5 = 96.5\%$

$$\frac{0.965x}{0.965} = \frac{125059}{0.965}$$

129595 people

(11) $I = prt$

$4800(0.09)\left(\frac{8}{12}\right) = 288$

$288 + 4800$

$\$5088$

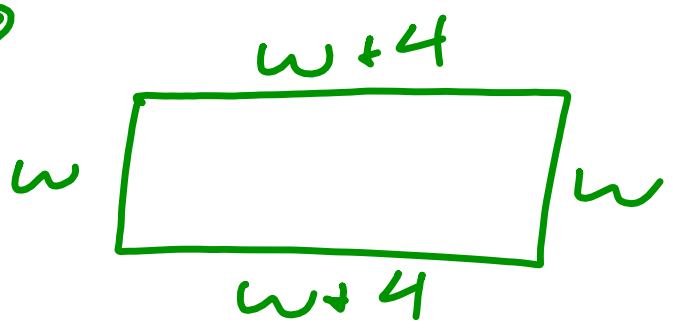
(3) 350% of ? 100% + 350% = 450%

$$\frac{4.5x}{4.5} = \frac{27}{4.5}$$

$$x = 6$$

$6

8



$w + w + 4 + w + w + 4 = 4w + 8$

④ $5-4(2n-6)$

$5-8n+24$

$-8n+29$

(10) $-7x + 3 = 31$

$-3 \quad -3$

$-7x = 28$

$\frac{-7x}{-7} = \frac{28}{-7}$

$x = -4$

(11) $4 - n = -3$

$-4 \quad -4$

$-n = -7$

$\frac{-n}{-1} = \frac{-7}{-1}$

$n = 7$

(12) $\frac{2}{3}y - 2 = \frac{1}{2}$ $\quad \frac{1}{2} + \frac{4}{2} = \frac{5}{2}$

$+2 \quad +\frac{2}{1}$

$\frac{3}{2}\left(\frac{2}{3}y\right) = \left(\frac{5}{2}\right)\frac{3}{2}$

$y = \frac{15}{4} = 3\frac{3}{4}$

(13) $2.8y - 1.3 = 4.3$

$+1.3 \quad +1.3$

$2.8y = 5.6$

$\frac{2.8y}{2.8} = \frac{5.6}{2.8}$

$y = 2$

$$28\overline{)56}\quad 2$$

-56

0

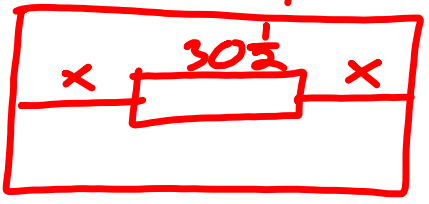
(5) $8x + 3(4x - 5)$

$8x + 12x - 15$

$20x - 15$

(13)

$60\frac{3}{4}$



$\times \frac{1}{2}$

$x + 30\frac{1}{2} + x = 60\frac{3}{4}$

$2x + 30\frac{1}{2} = 60\frac{3}{4}$

$-30\frac{1}{2} \quad -30\frac{1}{2}$

$\frac{2x}{2} = \frac{30\frac{1}{4}}{2}$

$x = 15\frac{1}{8}$ in