

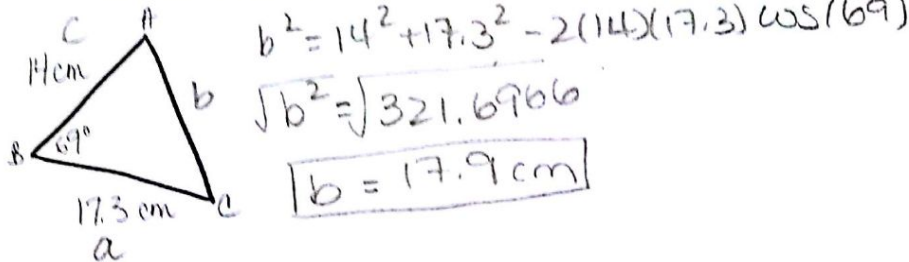
FOM - Flashback #3

1. Determine the measure of each interior angle of a regular 12 sided polygon.

$$S(n) = \frac{180(n-2)}{n}$$

$$S(12) = \frac{180(12-2)}{12} = 150^\circ$$

2. Determine the unknown side length.



3. Determine the standard deviation for the following set of data.

12	10	19
18	14	22
31	30	26
16	12	29
77	66	96

$$\frac{(\sum(x-\bar{x}))^2}{n}$$

$$\frac{(12-19.92)^2}{12} = 62.73$$

$$\frac{(18-19.92)^2}{12} = 3.69$$

$$\frac{(31-19.92)^2}{12} = 122.77$$

$$\frac{(16-19.92)^2}{12} = 15.37$$

$$\frac{(10-19.92)^2}{12} = 98.41$$

$$\frac{(14-19.92)^2}{12} = 35.05$$

$$\frac{(30-19.92)^2}{12} = 101.61$$

$$\frac{(22-19.92)^2}{12} = 4.33$$

$$\frac{(26-19.92)^2}{12} = 36.97$$

$$\frac{(29-19.92)^2}{12} = 82.45$$

$$\text{Total: } \frac{626.956}{12} = 52.25$$

$$\sigma = \sqrt{52.25} = 7.23$$

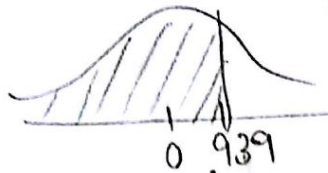
$$\bar{x} = \frac{77+66+96}{12}$$

$$\bar{x} = 19.92$$

4. If $\bar{x} = 23.4$ and $\sigma = 4.9$, what is the z score for someone who scored 28? What percent of the data were below this score?

$$z = \frac{28 - 23.4}{4.9}$$

$$z = 0.939$$



From z-score table.

82.6%

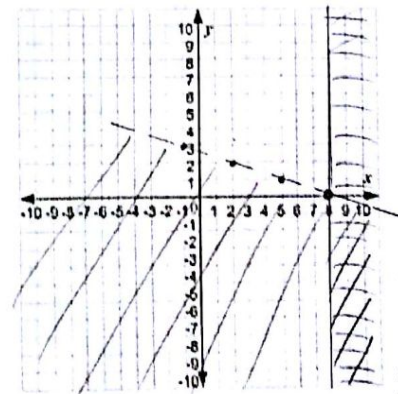
5. Determine which points are in the solution region and explain how you know.

$$x \geq 8$$

$$3y + x < 8 \rightarrow x \text{ intercept } (8, 0)$$

Points: (0,0)	(8,-2)	(-10, 15)	(9,-10)
NO	Yes	NO	Yes

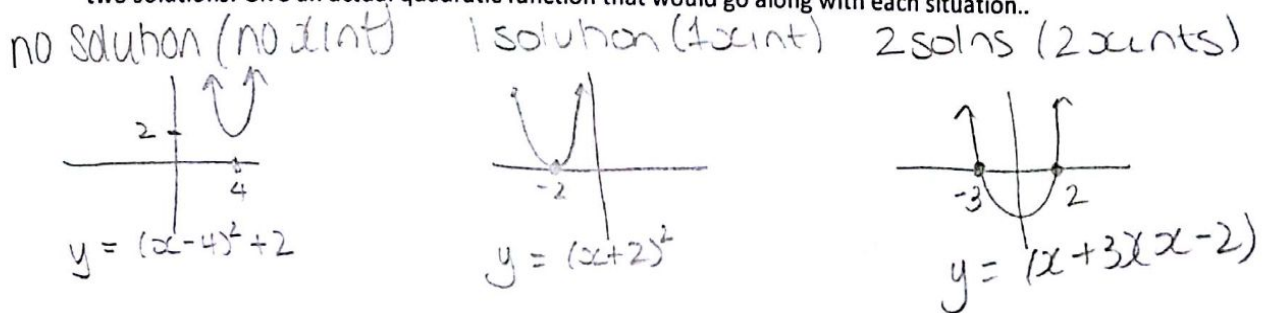
look for points in the solution area



↓ solution area

5.5
5)
75

6. Show examples of how a "happy" quadratic equation could have no solutions, one solution or two solutions. Give an actual quadratic function that would go along with each situation..



7. If Mike is travelling 65 km/hr and Janet was traveling at 24 m/s, who is travelling slower? Show clearly how you know.

$$\frac{24\text{m}}{1\text{s}} \times \frac{60\text{s}}{1\text{min}} \times \frac{60\text{min}}{1\text{hr}} \times \frac{1\text{km}}{1000\text{m}}$$

$$= \frac{24(60)(60)\text{ km}}{1000\text{ hr}}$$

$$= 86.4\text{ km/hr}$$

Mike is slower.

8. Solve the equation $3x^2 + 5x = 9$, give both exact and approximate solutions.

$$3x^2 + 5x - 9 = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$= \frac{-5 \pm \sqrt{25 - 4(3)(-9)}}{2(3)}$$

$$= \frac{-5 \pm \sqrt{133}}{6}$$

EXACT

$$x = \frac{-5 + \sqrt{133}}{6}$$

$$x = \frac{-5 - \sqrt{133}}{6}$$

APPROX

$$x = \frac{-5 \pm 11.53}{6}$$

$$x = 1.09$$

$$x = -2.76$$