

p.9 7)

~~A~~: Statement B is false, but statement C is true.

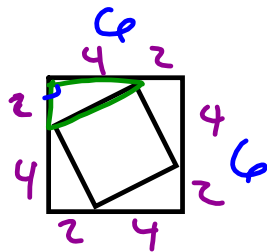
**B**: Statement C is true, but statement D is false.

**C**: Statement D is false, and statement A is false.

~~D~~: Statement A is true, and statement B is true.



9)



$$\frac{20 \div 4}{36 \div 4} = \frac{5}{9}$$

$$\begin{aligned} a^2 + b^2 &= c^2 & \sqrt{20} &= c \\ 2^2 + 4^2 &= c^2 & \sqrt{20} & \\ 4 + 16 &= c^2 & & \\ \sqrt{20} &= \sqrt{c^2} & & \end{aligned}$$

20)

$$a^2 + b^2 = c^2$$

$$10^2 + h^2 = 11^2$$

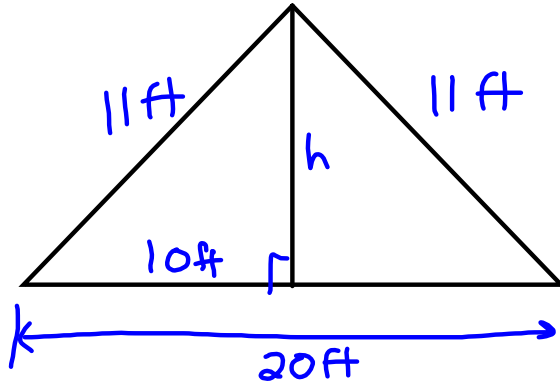
$$100 + h^2 = 121$$

$$\underline{-100} \quad = 100$$

$$h^2 = 21$$

$$\sqrt{h^2} = \sqrt{21}$$

$$h = \sqrt{3 \cdot 7} = \sqrt{21} \text{ ft}$$



"simplest radical form"

example

$$\sqrt{48} = \sqrt{2 \cdot 2 \cdot 2 \cdot 2 \cdot 3}$$

$$= 4\sqrt{3}$$

26)

$$Y_{12} + \underbrace{R + V}_{25} = 3 \begin{matrix} 412 \\ 25 \end{matrix}$$

(present)

$$Y = (R+4) + (V+4) \quad | \quad 7$$

$$42 + 8 = R + V + -8 + R + V + 8$$

$$42 = 2R + 2V + -8$$

$$\begin{matrix} +8 & & +8 \end{matrix}$$

$$\underline{50} = \underline{2R + 2V}$$

$$\frac{50}{2} = \frac{2R + 2V}{2}$$

$$\boxed{Y = 25} = \boxed{R + V}$$

$$\begin{matrix} -8 + 25 + 25 \\ -8 + 50 \\ 42 \end{matrix}$$

27) 600 total students  
 85% NOT native TX  
 ↳ 60% of lived in TX > 10yr.  
 30 students lived in TX < 1yr.

between 1 and 10yr ?

$$\frac{A}{600} = \frac{85 \times 6}{100 \times 6} \quad A = 510 \quad \text{Total non native TX}$$

$$\frac{A}{510} = \frac{60}{100} = \frac{3 \times 102}{5 \times 102}$$

$$A = 306 \quad \text{non native } > 10\text{yr}$$

$$+ 30$$

$$\hline 336$$

$$\begin{array}{r} 4 \\ 10 \\ \hline 510 \\ - 336 \\ \hline \end{array}$$

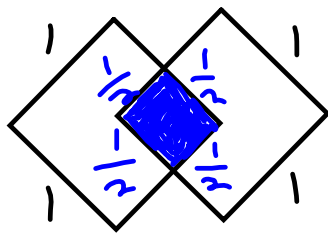
174 students

31)  $\frac{6!}{5! + 4!}$  ! "factorial"

$$\frac{6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}{\underbrace{5 \cdot 4 \cdot 3 \cdot 2 \cdot 1}_{120} + \underbrace{4 \cdot 3 \cdot 2 \cdot 1}_{24}} = \frac{6 \cdot \cancel{5} \cdot \cancel{4} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{1}}{\cancel{3} \cdot \cancel{3} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{2} \cdot \cancel{1} \cdot \cancel{1}} = \frac{6}{5} = 5$$

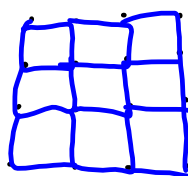
$\begin{array}{c} 144 \\ \swarrow \quad \searrow \\ 12 \cdot 12 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 3 \cdot 4 \quad 3 \cdot 4 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 2 \cdot 2 \quad 2 \cdot 2 \end{array}$

40)

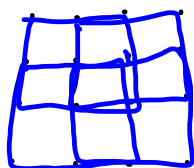


$$\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4} \text{ units}^2$$

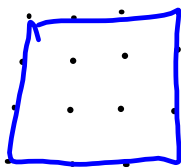
44)



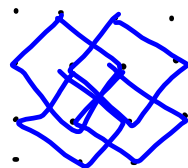
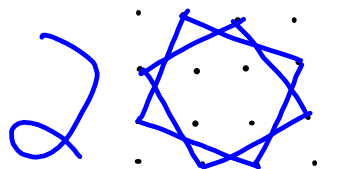
9



4



1



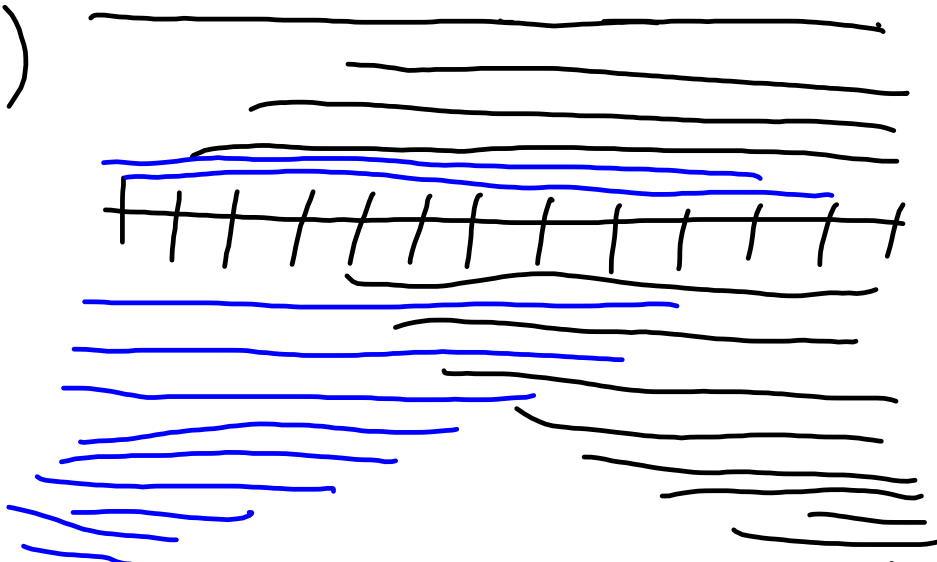
4

$$12 + 11 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 78$$

$$\frac{n(n+1)}{2}$$

$$\frac{12(12+1)}{2} = \frac{12(13)}{2} = \frac{156}{2} = 78$$

48)



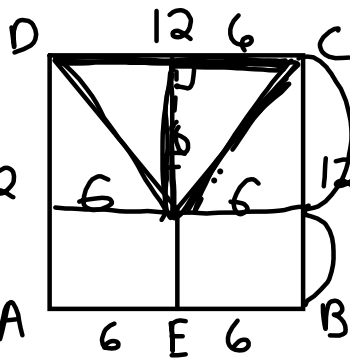
54)

$$6^2 + 8^2 = c^2$$

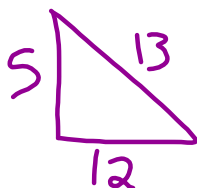
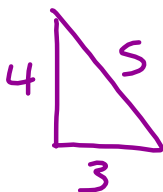
$$36 + 64 = c^2$$

$$\sqrt{c^2} = \sqrt{100}$$

$$c = 10$$



$$CF = 10$$



$$3 \overline{) 144}$$

$$\underline{- 12}$$

$$24$$

$$A = \frac{b \cdot h}{2}$$

$$2 \cdot 48 = \frac{12 \cdot h}{2}$$

$$\frac{48}{1} = \frac{12 \cdot h}{2}$$

$$96 = 12 \cdot h$$

$$h = 8$$

