

1.9 Probability

9/8/15

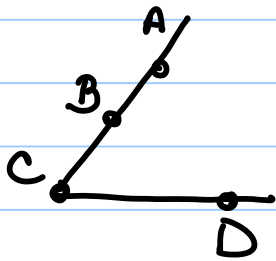
Note Title

9/8/2015

8th period

$$P = \frac{\text{WANT}}{\text{POSSIBLE}} = \frac{\text{WINNER}}{\text{POSSIBLE}}$$

Ex1



$$P(\text{on}) = 1$$

$$P(\text{not on}) = 0$$

$$P(B) = 1/4$$

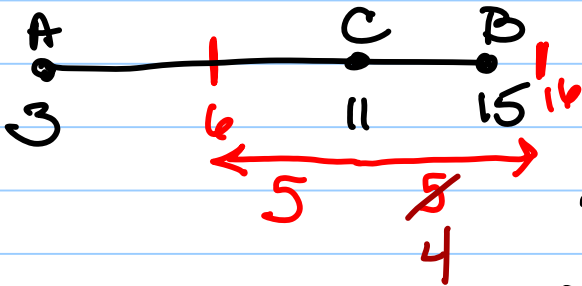
$$P(\text{2 pts on } \overrightarrow{CA}) = \frac{3}{6} = 1/2$$

List: AB BC CD
AC BD
 AD

$$P(\text{3 Hrs name } \angle) = \frac{4}{24} = 1/6$$

ABC	BAD	CAB	DAB
ABD	BAC	CAD	DAC
ACB	<u>BCD</u>	cBA	DBC
<u>ACD</u>	BDC	CBD	DBA
ADC	BCA	cDA	<u>DCA</u>
ADB	BDA	cDB	<u>DCB</u>

Ex2



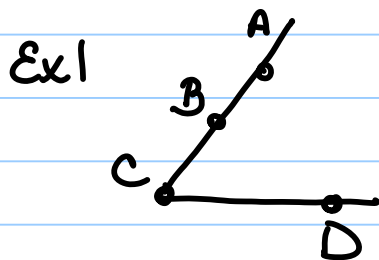
Q betw A & B

$$P(\text{Q within units of C}) =$$

$$\frac{5+4}{15-3} = \frac{9}{12} = \boxed{\frac{3}{4}}$$

$$6. P(2 \text{ acute } Ls) = \frac{3}{5} \cdot \frac{2}{4} = \frac{6}{20} = \frac{3}{10}$$

P7 : 1.9 $P = \frac{\text{WANT}}{\text{POSSIBLE}} = \frac{\text{WINNERS}}{\text{POSSIBILITIES}}$



Ex1

$P(\text{on}) = 1$

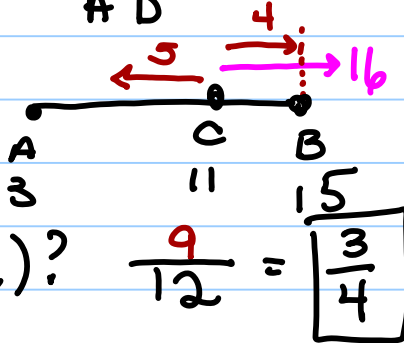
$P(\text{not on}) = 0$

$P(B) = \frac{1}{4}$

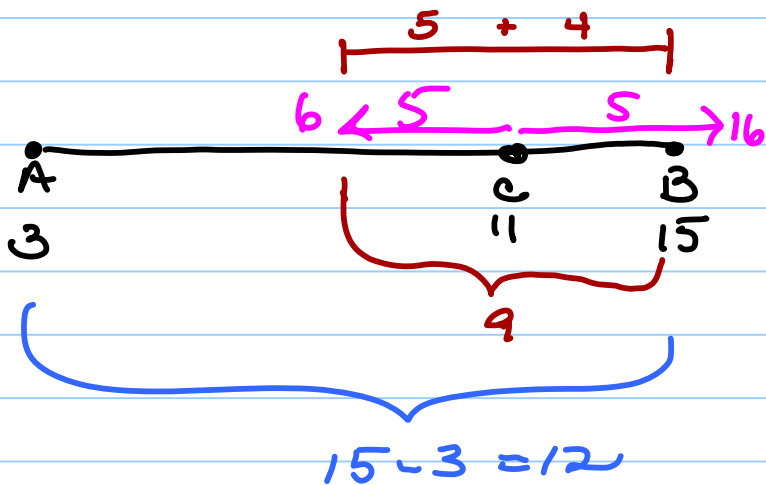
all P lie betw 0 & 1 (can't happen) like 100%

$P(\text{2 pts on } \vec{CA}) \rightarrow \begin{matrix} \text{AB} & \text{BC} \\ \text{AC} & \text{BD} \\ \text{AD} \end{matrix} \quad CD \rightarrow \frac{3}{6} = \frac{1}{2}$

Ex2. Q is betw A & B



$P(Q \text{ is within 5 units of } C)? \quad \frac{9}{12} = \boxed{\frac{3}{4}}$

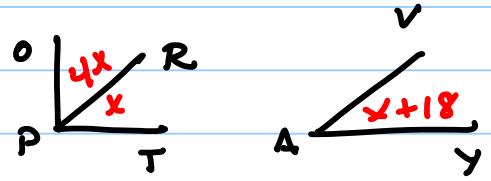


$\frac{9}{12} = \boxed{\frac{3}{4}}$

P5:

1.6:

3] Given: Diag, $\angle OPT = 90^\circ$
Prove: $m\angle VAY = 2 m\angle RPT$



Statements	Reasons
1. Diag, $m\angle OPT = 90^\circ$	1. Given
2. $5x = 90$	2. Substitute
3. $x = 18$	3. Division
4. $m\angle RPT = 18^\circ$ & $m\angle VAY = 36^\circ$	4. Substitute
5. $m\angle VAY = 2m\angle RPT$	5. Mult.

Every specific has a reason

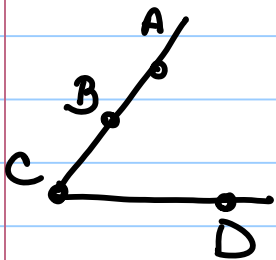
We are given the diag & $m\angle OPT = 90^\circ$. By substitution, $5x = 90$. By division, $x = 18$.
By substitution, $m\angle VAY = 36$ & $m\angle RPT = 18$.
Therefore $m\angle VAY = 2m\angle RPT$ by multiplication. ■

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8th period

$$P = \frac{\text{WANT}}{\text{POSSIBLE}} = \frac{\text{WINNER}}{\text{POSSIBLE}}$$

Ex 1



$$P(\text{on}) = 1$$

$$P(\text{not on}) = 0$$

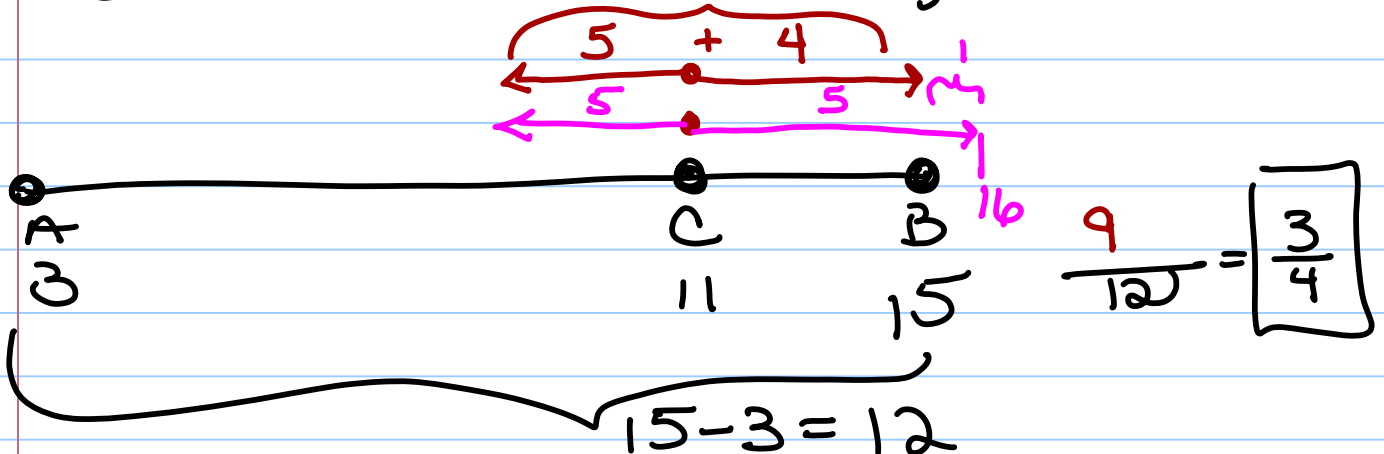
$$P(B) = \frac{1}{4}$$

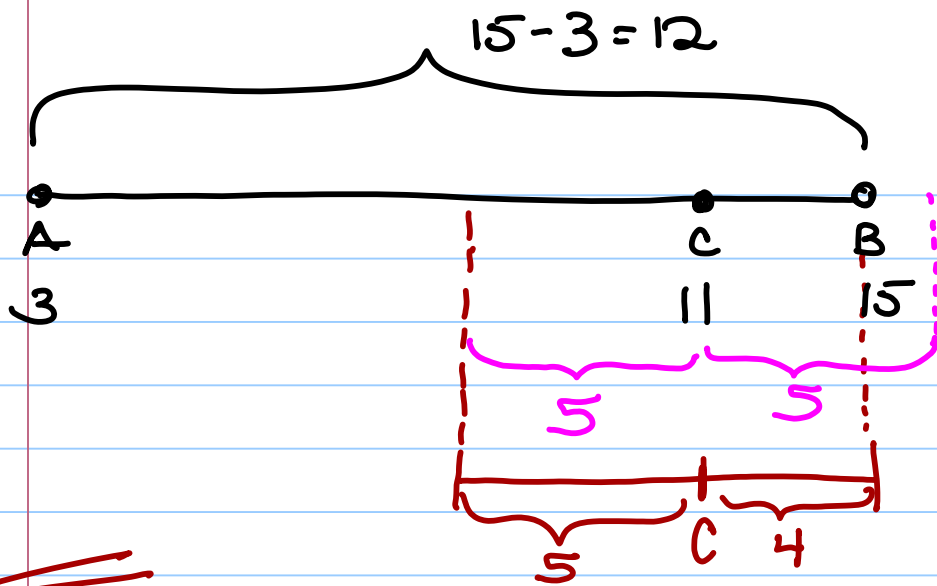
All probabilities lie betw 0 & 1 \Rightarrow
 0: won't happen
 1: 100%, will happen

$$P(\text{2 pts on } \overrightarrow{CA}) = \frac{\begin{matrix} \text{AB} & \text{BC} \\ \text{AC} & \text{BD} \\ \text{AD} \end{matrix}}{6} = \frac{3}{6} = \boxed{\frac{1}{2}}$$

Ex 2 Q betw A & B

$P(Q \text{ lies 5 units from } C)$





ok area $\frac{9}{12}$
total dist: 12

#6 2 of 5 \angle s random

$P(\text{both are acute})$

A: 50
B: 60
C: 90

D: 130
E: 40°

win: $\frac{3}{5}$ • $\frac{2}{4}$ = $\frac{3}{10}$

HL:

list: $\begin{matrix} \text{AB} & \text{BC} & \text{CD} & \text{DE} \\ \text{AC} & \text{BD} & \text{CE} & \\ \text{AD} & \text{BE} & & \\ \text{AE} & & & \end{matrix}$ $\frac{3}{10}$

