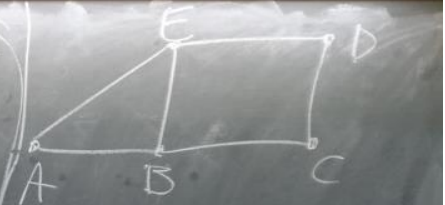


$v$	$uv$	$uvu$	$w$	$x$	$wx$	$w \vee x$	$w \wedge x$
T	T	T	T	T	T	T	T
F	F	F	T	F	F	T	F
T	F	F	F	T	F	F	F
F	F	F	F	F	F	F	F



Minimal coverings:  
 $\{A, B, D\}, \{A, C, E\}, \{B, C, E\}, \{B, E, D\}$

Maximal indep. sets:  
 $\{C, E\}, \{B, D\}, \{A, D\}, \{A, C\}$

$$\begin{aligned}
 & (A+BE)(B+ACE)(C+BD)(D+CE)(E+ABD) = (AB+ACE+BE+BEACE)(\quad) = \\
 & = (AB+ACE+BE) \cdot (C+BD)(\quad) = (ABC+AB\cancel{B}D+ACE\cancel{C}+ACEBD+BEC+BE\cancel{B}D)(\quad) = \\
 & \stackrel{B, E, D}{\text{C}} = (ABC+ABD+ACE+BEC+BED) \cdot (D+CE) = \\
 & = (AB\cancel{C}D+AB\cancel{C}E+ABD\cancel{D}+ABDCE+ACE\cancel{C}+ACE\cancel{C}E+BEC\cancel{D}+BEC\cancel{C}E+BED\cancel{D}+BEDCE)(\quad) = \\
 & \stackrel{A, C}{\text{}} = (ABD+ACE+BEC+BED)(E+ABD) = ABDE+ABD\cancel{A}BD+ACE\cancel{C}+ACEABD+BEC\cancel{C}+BECABD+BED\cancel{C}+BEDABD = \\
 & \quad \quad \quad = ABD+ACE+BEC+BED
 \end{aligned}$$

$$\varphi \leq \frac{2}{3}\varepsilon$$

$$z = v - \varepsilon + \varphi \leq v - \varepsilon + \frac{2}{3}\varepsilon$$

$$v - \frac{1}{3}\varepsilon \geq z \quad 3v - \varepsilon \geq 6$$
$$\varepsilon \leq 3v - 6$$

$$\delta v \leq 6v - 12$$

$$\delta \leq 6 - \frac{12}{v}$$

$$\delta < 6$$

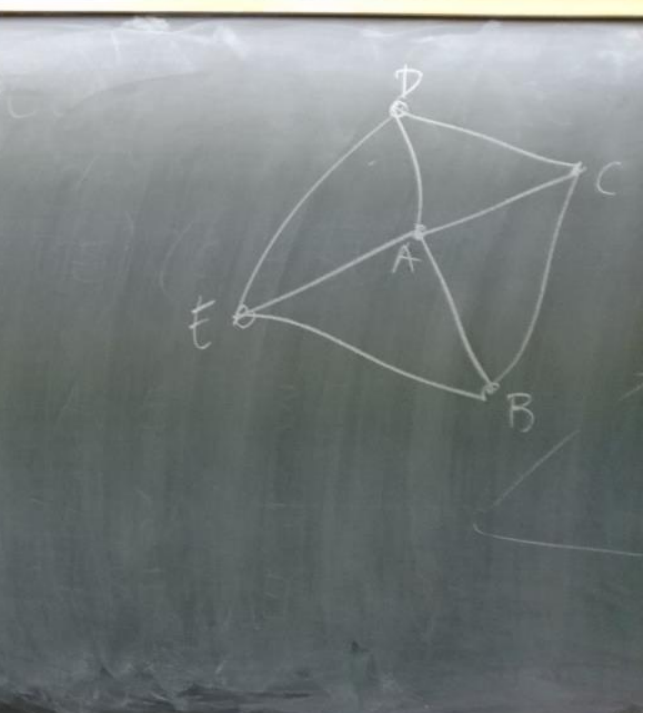
$$\delta \leq 5$$

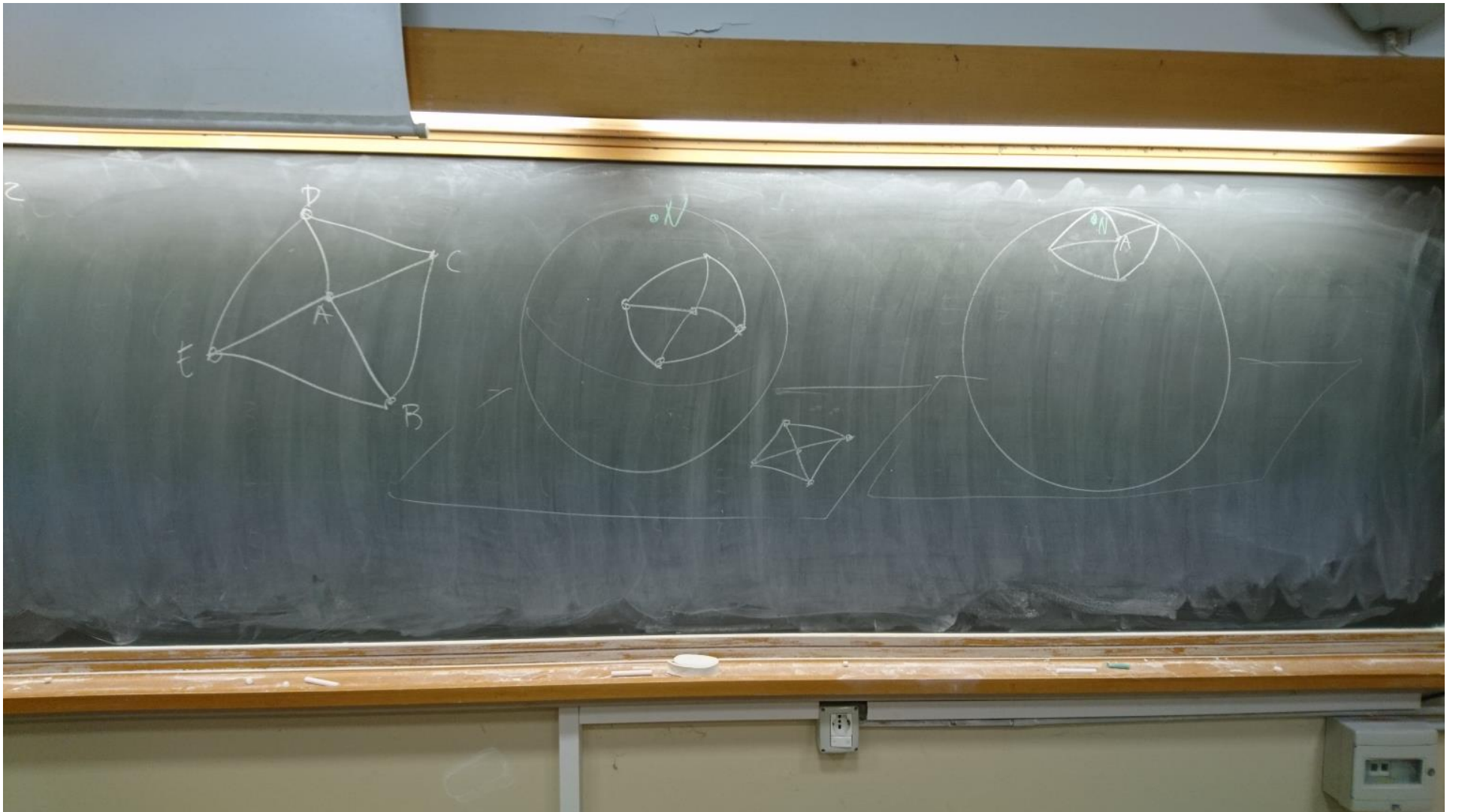
$$4\varphi \leq 18$$

$$\varphi \leq \frac{9}{2}$$

$$\varphi < 5$$

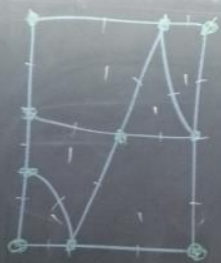
$$\varphi \leq 4$$







$$13 - 19 + 7 = 1$$



$$10 - 15 + 6 = 1$$

$$\begin{aligned} \nu - (\nu - 1) + 1 &= \\ &= \nu - \nu + 1 + 1 = 2 \end{aligned}$$

$$\varphi \leq \frac{2}{3}$$

$$\textcircled{2} = \nu - \varepsilon + \varphi \leq \nu + \varepsilon - \nu = \varepsilon$$

$$\nu - \frac{1}{3}\varepsilon \geq 2$$

$$\varphi \leq \frac{2}{3}\varepsilon$$

$$z = \nu - \varepsilon + \varphi \leq \nu - \varepsilon + \frac{2}{3}\varepsilon$$

$$\nu - \frac{1}{3}\varepsilon \geq z \quad 3\nu - \varepsilon \geq 6$$
$$\varepsilon \leq 3\nu - 6$$

$$\delta \nu \leq 6\nu - 12$$

$$\delta \leq 6 - \frac{12}{\nu}$$

$$\delta < 6$$

$$\delta \leq 5$$

$$4\varphi \leq 18$$

$$\varphi \leq \frac{9}{2}$$

$$\varphi < 5$$

$$\varphi \leq 4$$