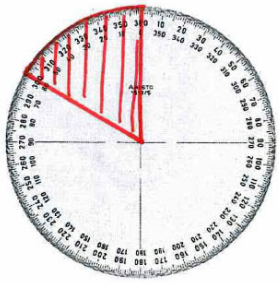
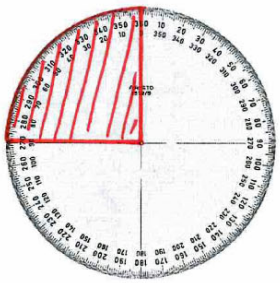
AB ZB6 LU46-47 - „Winkelmessung“

1. Zeichne mit **rot** folgende Winkel in den Winkelmesser ein und schraffiere den Winkel :

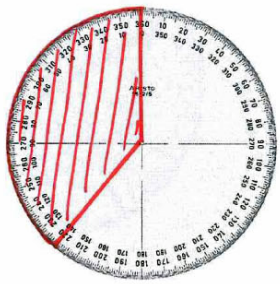
a.) 60°



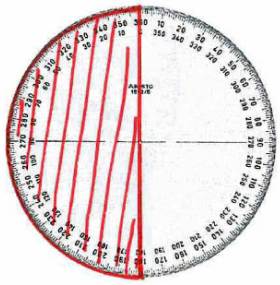
b.) 90°



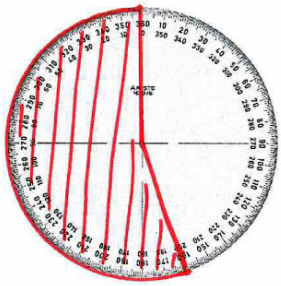
c.) 140°



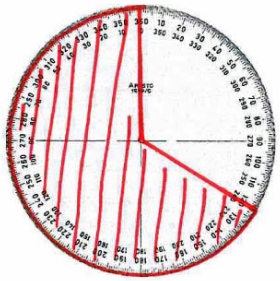
d.) 180°



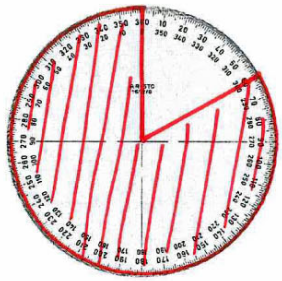
e.) 200°



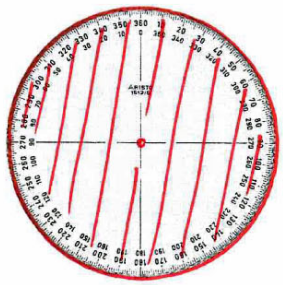
f.) 240°



g.) 300°

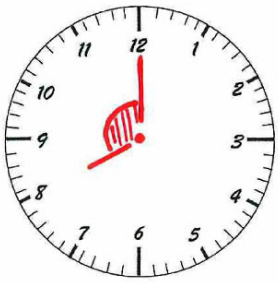


h.) 360°



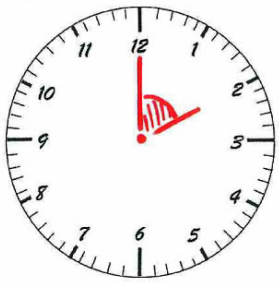
2. Trage mit Lineal auf dem leeren Ziffernblatt den Stunden- und Minutenzeiger für folgende Uhrzeiten ein, **miss** mit dem Winkelmesser den *kleineren* Winkel und notiere ihn :

a.) 08:00



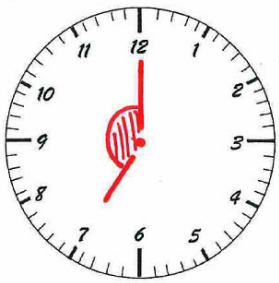
(ca.) 120°

b.) 14:00



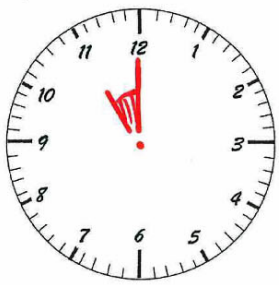
(ca.) 60°

c.) 19:00



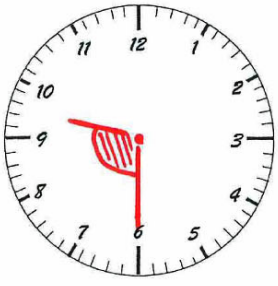
(ca.) 150°

d.) 23:00



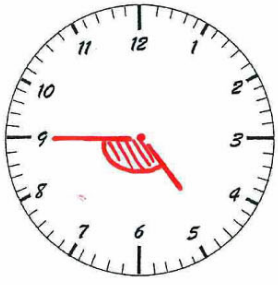
(ca.) 30°

e.) 09:30



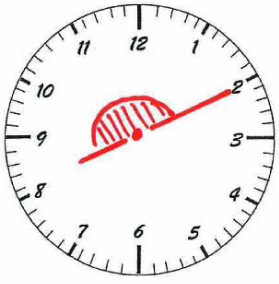
(ca.) 105°

f.) 16:45



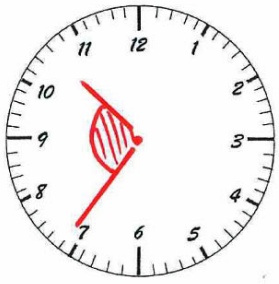
ca. 130°

g.) 20:10



ca. 180°

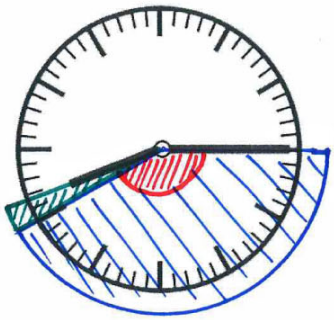
h.) 22:36



ca. 100°

3. Notiere jeweils die Uhrzeit in digitaler Form (z.B. 22:36) und berechne den kleineren Winkel zwischen Stunden- und Minutenzeiger.

a.) 20 : 15

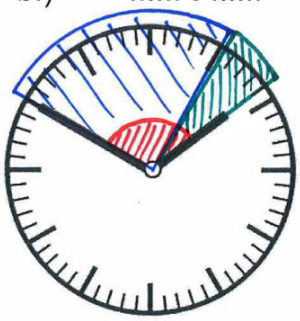


$25 \cdot 6° = 150°$

$15 \cdot 0{,}5° = 7{,}5°$

$150° + 7{,}5° = 157{,}5°$

b.) 13 : 50

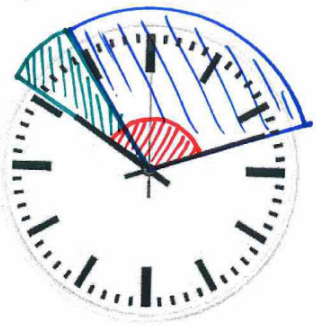


$15 \cdot 6° = 90°$

$50 \cdot 0{,}5° = 25°$

$90° + 25° = 115°$

c.) 22 : 12

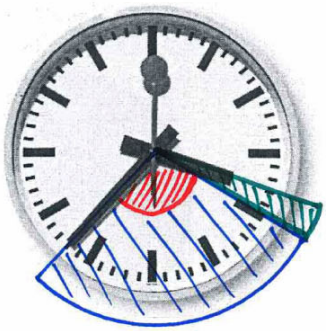


$17 \cdot 6° = 102°$

$48 \cdot 0{,}5° = 24°$

$102° + 24° = 126°$

d.) 15 : 37



$17 \cdot 6° = 102°$

$23 \cdot 0{,}5° = 11{,}5°$

$102° + 11{,}5° = 113{,}5°$

4. Welchen **Winkel** überstreichen Stunden-, Minuten- und Sekundenzeiger in :

a.) 1 Sekunde

h : $\frac{1}{120}° = 0{,}008\overline{3}°$

min : $0{,}1°$

sec : $6°$

b.) 1 Minute = 60 sec

h : $0{,}5°$

min : $6°$

sec : $360°$

c.) 1 Stunde = 60 min = 3'600 sec

h : $30°$

min : $360°$

sec : $21'600°$

d.) 1 Tag = 24 h = 1'440 min = 86'400 sec

h : $720°$

min : $8'640°$

sec : $518'400°$