

























23.(a) AC = $\sqrt{5^{2}+7^{2}}$

(b) VO = $\sqrt{13^{2}-4.301^{2}}$

 = 12.27

(c) BD = AC = 8.602

 BO = $\frac{1}{2}$x8.602 = 4301

∠VBO = θ

Cos θ = $\frac{4.301}{13}$ = 0.3308

θ = Cos-(0.3308) = 70.68

(d) VM = $\sqrt{MO^{2}-VO^{2}}$ = $\sqrt{2.5^{2}+12.27^{2}}$

 = $\sqrt{156.8029} $

 = 12.52

 ∠VMO = d

 Cos d = $\frac{2.5}{12.52}$ = 0.1997

 d = Cos-1(0.1997) = 78.480

24.(a) DCE = EDF (∠s in alternate segment)

 = 420

1. BCE = BDF (∠s in the same segment)

$\frac{180-48}{2} $= 420

 = 240

1. DCB = DBF (∠s in alternate segment)

DBF = $\frac{180-48}{2}$ (AB =D)

 = 660

1. CED = CBD (∠s in the same segment)

CBD = 180 – (60 + 60)(∠s on straight line)

CED = 540

1. BEF = BCD (ext. angle = opp. interior angle)

 = 24 + 42

 = 660