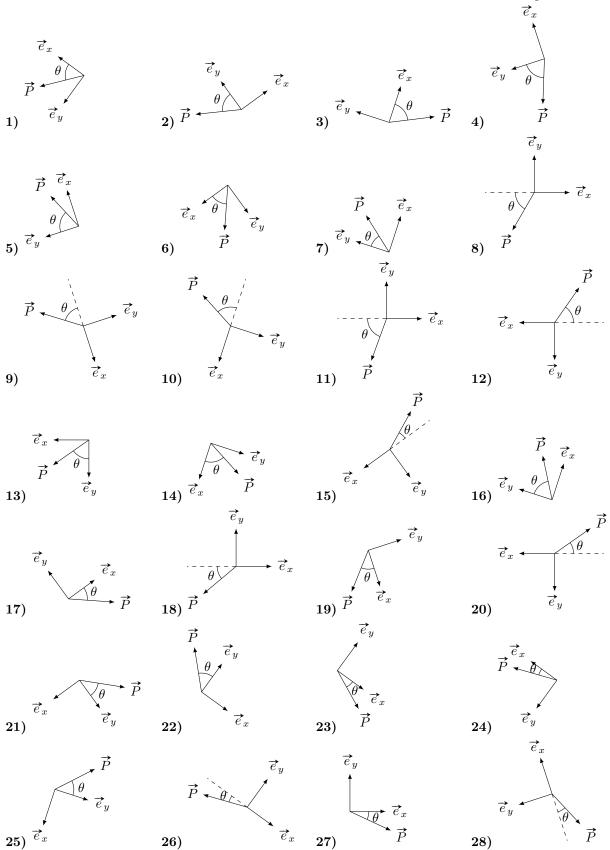
Entraı̂nement technique: projections

Pour chacun des cas ci-dessous, donner l'expression du vecteur \vec{P} de norme P dans la base $\vec{e_x}, \vec{e_y}$.



Entraînement technique: projections – Solutions

1)
$$P(\cos\theta \vec{e}_x + \sin\theta \vec{e}_y)$$

2)
$$P(-\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

3)
$$P(\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

4)
$$P(-\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

5)
$$P(\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

6)
$$P(\cos\theta \vec{e}_x + \sin\theta \vec{e}_y)$$

7)
$$P(\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

8)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

9)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

10)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$
 11) $P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$

11)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

12)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

13)
$$P(\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

14)
$$P(\cos\theta \vec{e}_x + \sin\theta \vec{e}_y)$$

15)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

16)
$$P(\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

17)
$$P(\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

18)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$
 19) $P(\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$

19)
$$P(\cos\theta \vec{e}_{x} - \sin\theta \vec{e}_{y})$$

20)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

21)
$$P(-\sin\theta\vec{e}_x + \cos\theta\vec{e}_y)$$
 22) $P(-\sin\theta\vec{e}_x + \cos\theta\vec{e}_y)$ 23) $P(\cos\theta\vec{e}_x - \sin\theta\vec{e}_y)$

22)
$$P(-\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

23)
$$P(\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

24)
$$P(\cos\theta \vec{e}_x + \sin\theta \vec{e}_y)$$

25)
$$P(-\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$

25)
$$P(-\sin\theta \vec{e}_x + \cos\theta \vec{e}_y)$$
 26) $P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$ **27)** $P(\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$

27)
$$P(\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$

28)
$$P(-\cos\theta \vec{e}_x - \sin\theta \vec{e}_y)$$