**Form the partial differential equations:**

1. $z = (x + a)(y + b)$ — **Ans.** $pq = z$
2. $(x - h)^2 + (y - k)^2 + z^2 = a^2$ — **Ans.** $z^2 (p^2 + q^2 + 1) = a^2$
3. $2z = (ax + y)^2 + b$ — **Ans.** $px + qy = q^2$
4. $ax^2 + by^2 + z^2 = 1$ — **Ans.** $z(px + qy) = z^2 - 1$
5. $x^2 + y^2 = (z - c)^2 \tan^2 \alpha$ — **Ans.** $yp - xq = 0$
6. $z = f(x^2 + y^2)$ — **Ans.** $yp - xq = 0$
7. $2z = \frac{x^2}{a^2} + \frac{y^2}{b^2}$ — **Ans.** $2z = xp + yq$
8. $f(x + y + z, x^2 + y^2 + z^2) = 0$ — **Ans.** $(y - z)p + (z - x)q = x - y$