Type 1: Simple Re-arrangement

a) Sin x, cos x, tan x = 1, 0, -1, exact values, decimals, any constant
b) 2 tan x + 1 = 0 etc.

Type 2: Extended Domain

a) sin 2x, cos 3x = constant
b) sin 3x + 1 = 0 etc.

Type 3: Change to Tangent

a) sin x = cos x
b) 2 sin x = 3 cos x
c) 3 sin x – 2 cos x = 0

Type 4: Quadratic

(i) Simple power
a) $2\sin^2 x = 1$
b) $2\cos^2 x + 1 = 0$

(ii) Common Factor
a) sin x = sin x cos x
b) 3cos x – 2 sin x cos x = 0

(iii) Trinomial Form
a) $4 \sin^2 x + 11 \sin x + 6 = 0$
b) $5 \sin^2 x - 2 = 2 \cos x$
c) $6 \cos^2 x – \sin x – 5 = 0$

Type 5: Double Angle

(i) Reduces to Common Factor
a) Sin 2x – cos x = 0
b) Sin 2x + sin x = 0

(ii) Reduces to Trinomial form
a) Cos 2x + cos x = 0
b) cos 2x + sin x = 0
c) cos 2x – 7 sin x – 4 = 0
d) cos 2x – 5 sin x = 2

Type 6: Phase Angle

a) cos (x + 20) = 0.4 sin (x – 15) = $1/\sqrt{2}$
b) 2 sin (2x – 60) = 1
c) 3 cos (3x + 40) + 1 = 0

Type 7: Wave Function

a) cos x + sin x = 1
b) 2 cos x + 3 sin x = -1
c) 3 cos 2x + 4 sin 2x + 1 = 0