① $10\cos(x)+2=-3$

⊛ Isolate

$\Rightarrow 10\cos(x)=-5$

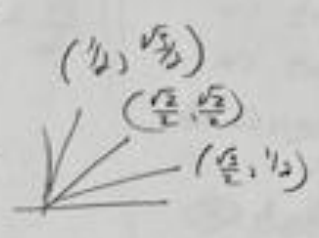
$\Rightarrow \cos(x)=\frac{-5}{10}=-\frac{1}{2}$

⊛ Quadrant Check:

QII QIII

⊛ Reference Angle

$x_R=\pi/3$



⊛ Solve:

$x=2\pi/3 ; x=4\pi/3$

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② $2\sin(x)=1$

⊛ Isolate

$\sin(x)=1/2$

⊛ Quad. check:

QI QII

⊛ Ref. $\measuredangle$:

$x_R=\pi/6$

⊛ Solve:

$x=\pi/6 ; x=5\pi/6$

③ $\tan(x)+1=0$

⊛ Isolate:

$\tan(x)=-1$

⊛ Quad. check:

QII QIIII

⊛ Ref $\measuredangle$:

$x_R=\pi/4$

⊛ Solve:

$x=3\pi/4 ; x=7\pi/4$

Pg Quiz

(4) $4\cos^2(x) - 10 = -7$
$+10 \quad +10$

① Isolate:
$\Rightarrow 4\cos^2(x) = 3$
$\Rightarrow \cos^2(x) = \frac{3}{4}$
$\Rightarrow \cos(x) = \pm\sqrt{\frac{3}{4}} = \pm\frac{\sqrt{3}}{2}$

② Quadrant Check:
ALL 4

③ Ref. x: $\pi/6$

④ Solve:
$x = \pi/6$; $x = 5\pi/6$;
$x = 7\pi/6$; $x = 11\pi/6$

(5) $3\tan^2(x) + 1 = 4$

① Isolate:
$\Rightarrow 3\tan^2(x) = 3$
$\Rightarrow \tan^2(x) = 1$
$\Rightarrow \tan(x) = \pm 1$

② Quadrant check:
ALL 4

③ Ref x:
$x_R = \pi/4$

④ solve
$x = \pi/4$; $x = 3\pi/4$
$x = 5\pi/4$; $x = 7\pi/4$

(6) $4\cos^2(x) - 2 = 0$

① Isolate:
$\Rightarrow 4\cos^2(x) = 2$
$\Rightarrow \cos^2(x) = \frac{2}{4}$
$\Rightarrow \cos(x) = \pm\sqrt{\frac{2}{4}} = \pm\frac{\sqrt{2}}{2}$

② Quad. Check:
ALL 4

③ Ref x
$x_R = \pi/4$

④ Solve:
$x = \pi/4$; $x = 3\pi/4$
$x = 5\pi/4$; $x = 7\pi/4$

① NOTE: THIS SHOULD BE:
$3\tan^2(x) - 1 = 0$

① Isolate
$\Rightarrow 3\tan^2(x) = 1$
$\Rightarrow \tan^2(x) = \frac{1}{3}$
$\Rightarrow \tan(x) = \pm\sqrt{\frac{1}{3}} = \pm\frac{1}{\sqrt{3}}$

② Quad Check:
ALL 4

③ Ref x: $x_R = \pi/6$

④ Solve
$x = \pi/6$; $x = 5\pi/6$
$x = 7\pi/6$; $x = 11\pi/6$

$\frac{(2-x)(1+x)}{8+x-}$