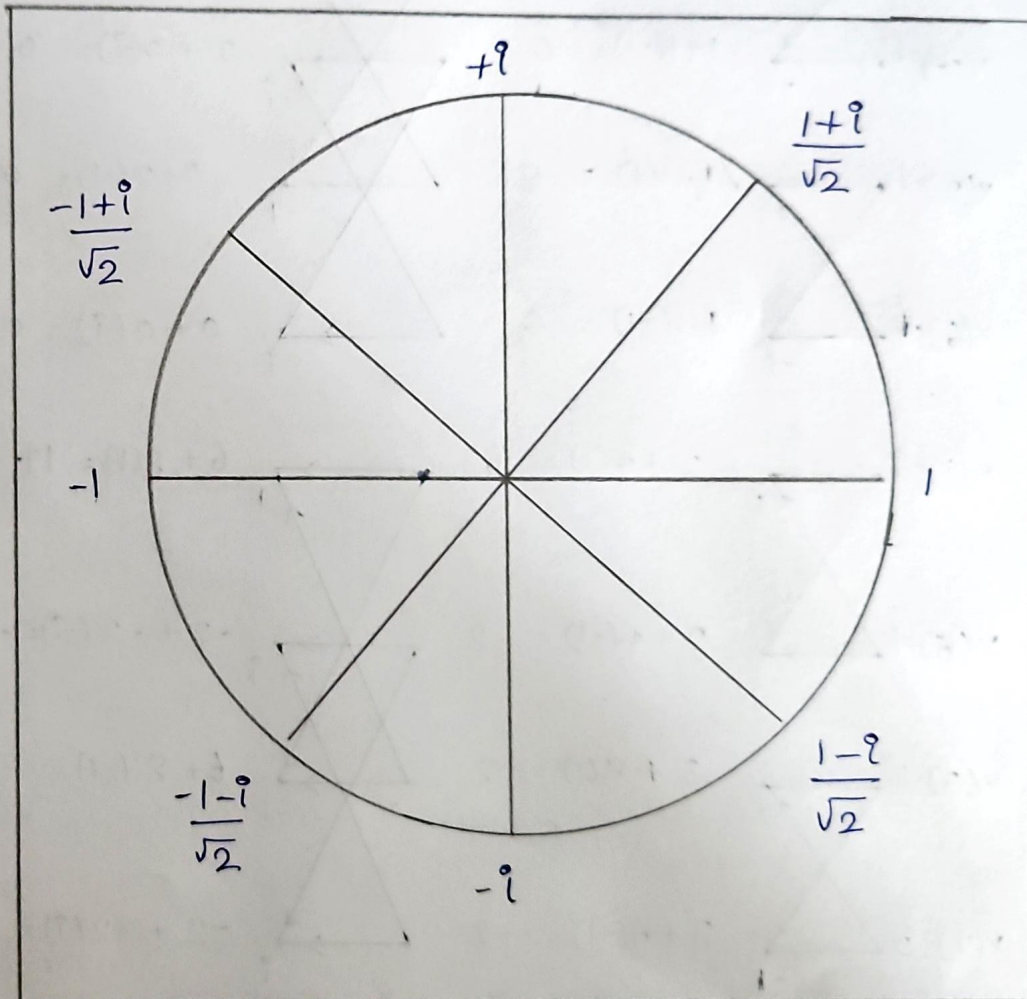


$$X(n) = \{1, 2, 1, 3, 1, 4, 1, 5\}$$

Even	Odd
$x(0) - 1$	$x(1) - 2$
$x(2) - 1$	$x(3) - 3$
$x(4) - 1$	$x(5) - 4$
$x(6) - 1$	$x(7) - 5$



$$x(0) = 1 \quad 1 + 1(1) = 2$$

$$2 + 2(1) = 4$$

$$4 + 14(1) = 18$$

$$x(4) = -1 \quad 1 + 1(-1) = 0$$

$$0 + 0(i) = 0$$

$$0 + (-2 + 2i) \left(\frac{1-i}{\sqrt{2}} \right) = 2\sqrt{2}i$$

$$x(2) = 1 \quad 1 + 1(1) = 2$$

$$2 + 2(-1) = 0$$

$$0 + -2(-i) = 2i$$

$$x(6) = -1 \quad 1 + 1(-1) = 0$$

$$0 + 0(i) = 0$$

$$0 + (-2 - 2i) \left(\frac{1-i}{\sqrt{2}} \right) = 2\sqrt{2}i$$

$$x(1) = 2 \quad 2 + 4(1) = 6$$

$$6 + 8(1) = 14$$

$$4 + 14(-1) = -10$$

$$x(5) = 4 \quad 2 + 4(-1) = -2$$

$$-2 + -2(-i) = -2 + 2i$$

$$0 + (-2 + 2i) \left(\frac{-1+i}{\sqrt{2}} \right) = -2\sqrt{2}i$$

$$x(3) = 3 \quad 3 + 5(1) = 8$$

$$6 + 8(-1) = -2$$

$$0 + -2(i) = -2i$$

$$x(7) = -5 \quad 3 + 5(-1) = -2$$

$$-2 + -2(i) = -2 - 2i$$

$$0 + (-2 - 2i) \left(\frac{1+i}{\sqrt{2}} \right) = -2\sqrt{2}i$$