Exercise 1C

Question 5:

(i) $4+\sqrt{5}$

Since 4 is a rational number and $\sqrt{5}$ is an irrational number.

So, $4+\sqrt{5}$ is irrational because sum of a rational number and irrational number is always an irrational number.

(ii) $(-3+\sqrt{6})$

Since -3 is a rational number and $\sqrt{6}$ is irrational.

So, $(-3+\sqrt{6})$ is irrational because sum of a rational number and irrational number is always an irrational number.

(iii) $5\sqrt{7}$

Since 5 is a rational number and $\sqrt{7}$ is an irrational number.

So, $5\sqrt{7}$ is irrational because product of a rational number and an irrational number is always irrational.

(iv) $-3\sqrt{8}$

Since -3 is a rational number and $\sqrt{8}$ is an irrational number.

So, $-3\sqrt{8}$ is irrational because product of a rational number and an irrational number is always irrational.

(v) $\frac{2}{\sqrt{5}}$

$\frac{2}{\sqrt{5}}=\frac{2\times\sqrt{5}}{\sqrt{5}\times\sqrt{5}}=\frac{2\sqrt{5}}{5}=\frac{2}{5}\times\sqrt{5}$

$\frac{2}{\sqrt{5}}$ is irrational because it is the product of a rational number and the irrational number $\sqrt{5}$.

(vi) $\frac{4}{\sqrt{3}}$

$\frac{4}{\sqrt{3}}=\frac{4\times\sqrt{3}}{\sqrt{3}\times\sqrt{3}}=\frac{4\sqrt{3}}{3}=\frac{4}{3}\times\sqrt{3}$

$\frac{4}{\sqrt{3}}$ is an irrational number because it is the product of rational number and irrational number $\sqrt{3}$.

Question 6:

(i) True
(ii) False
(iii) True
(iv) False
(v) True
(vi) False
(vii) False
(viii) True
(ix) True

********** END **********