Exercise 2.2

Q.1 Identify the property used in the following.

(i)	$a+b=b+a$	Commutative Property *w.r.t* addition
(ii)	$(ab)c=a(bc)$	Associative Property *w.r.t* multiplication
(iii)	$7\times 1=7$	Multiplicative Identity
(iv)	$x>y$ or $x=y$ or $x<y$	Trichotomy
(v)	$ab=ba$	Commutative *w.r.t* multiplication
(vi)	$a+c=b+c=a+b$	Cancellation Property of addition
(vii)	$5+(-5)=0$	Additive Inverse
(viii)	$7\times\frac{1}{7}=1$	Multiplicative inverse
(ix)	$a>b\Rightarrow ac>bc(c>0)$	Multiplicative property

Q.2 Fill in the following blanks by stating the properties of real numbers used.

$3x+3(y-x)$

$=3x+3y-3x,\ldots$ Distributive property

$=3x-3x+3y,\ldots$ Commutative

$=0+3y,\ldots$ Additive Inverse

$=3y,\ldots$ Additive identity

Q.3 Give the name of property used in the following.

(i)	$\sqrt{24}+0=\sqrt{24}$	Additive Identity
(ii)	$-\frac{2}{3}\left[5+\frac{7}{2}\right]=\left[-\frac{2}{3}\right](5)+\left[-\frac{2}{3}\right]\left[\frac{7}{2}\right]$	Distributive Property
(iii)	$\pi+(-\pi)=0$	Additive Inverse
(iv)	$\sqrt{3}.\sqrt{3}$ is a real number.	Closure property w.r.t x.
(v)	$\left[-\frac{5}{8}\right]\left[-\frac{8}{5}\right]=1$	Multiplicative Inverse.

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