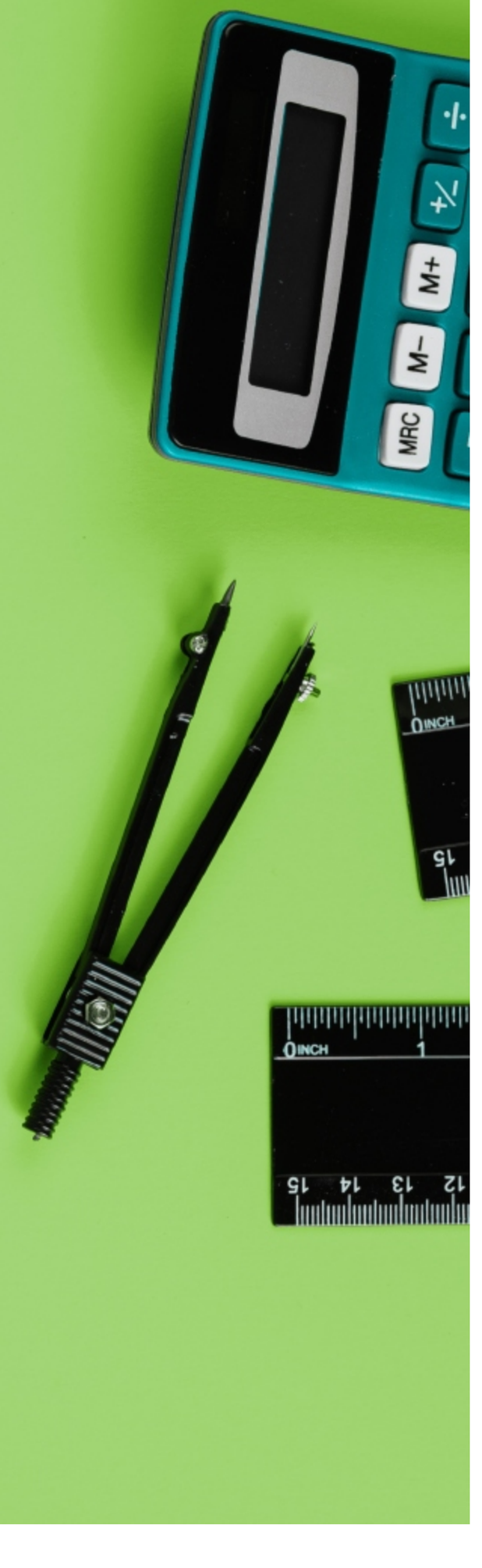
RD Sharma Solutions

Class 7

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Chapter-1- Integers

Exercise 1.1

Q.1 Determine each of the following Products:

(i) 12×7 (ii) $(-15) \times 8$ (iii) $(-25) \times (-9)$

(iv) $125 \times (-8)$

Solution: (i) $12 \times 7 = 84$

(ii) $(-15) \times 8 = -(15 \times 8) = -120$

(iii) $(-25) \times (-9) = 25 \times 9 = 225$

(iv) $125 \times (-8) = -(125 \times 8) = -2000$

Q.2 Find each of the following products:

(i) $3 \times (-8) \times 5$ (ii) $9 \times (-3) \times (-6)$ (iii) $(-2) \times 36 \times (-5$

(iv) $(-2) \times (-4) \times (-6) \times (-8)$

Solution: (i) $3 \times (-8) \times 5 = \{3 \times (-8)\} \times 5$

$= -(3 \times 8) \times 5 = -24 \times 5 = -120$

(ii) $9 \times (-3) \times (-6) = \{9 \times (-3)\} \times (-6) = -(9 \times 3) \times (-6)$

$= -27 \times -6$

$= 27 \times 6 = 162$

(iii) $(-12) \times (-13) \times (-5) = \{(-12) \times (-13)\} \times (-5)$

$= 156 \times -5 = -(156 \times 5)$

$= -780$

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(iv) $125 \times -8 = -(125 \times 8) = -1000$

Q.3 Find the value of :

(i) $1487 \times 327 + (-487) \times 327$

(ii) $28945 \times 99 - (-28945)$

Solution : (i) $1487 \times 327 + (-487) \times 327$

$= 327\,(1487 - 487)$ { using $a \times (b+c) = a \times b + a \times c$ }

$= 327 \times 1000 = 327000$

(ii) $28945 \times 99 - (-28945)$

$= 28945 \times 99 + 28945$

$= 28945 \times (99+1) = 28945 \times 100 = 2894500$

Q.4 Complete the following multiplication table:

Is, the multiplication table symmetrical about the diagonal joining the upper left corner to the lower right corner

Solution :

×	-4	-3	-2	-1	0	1	2	3	4
-4	16	12	8	4	0	-4	-8	-12	-16
-3	12	9	6	3	0	-3	-6	-9	-12
-2	8	6	4	2	0	-2	-4	-6	-8
-1	4	3	2	1	0	-1	-2	-3	-4
0	0	0	0	0	0	0	0	0	0
1	-4	-3	-2	-1	0	1	2	3	4
2	-8	-6	-4	-2	0	2	4	6	8
3	-12	-9	-6	-3	0	3	6	9	12
4	-16	-12	-8	-4	0	4	8	12	16

Yes,

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Q.5 Determine the integer whose product with -1 is

(i) 58 (ii) 0 (iii) −225

Solution (i) −58 (ii) 0 (iii) 225

Q6 what will be the sign of the product if we multiply together

(i) 8 negative Integers and 1 Positive integer?

(ii) 21 negative integers and 3 Positive integers?

(iii) 199 negative intgers and 10 positive integers?

Solution: (i) ∵ Product of 8 negative integers is positive

∴ Positive multiplied by positive integers gives positive.

(ii) Negative, As. Product of 21 negative integers is negative. also Product of negative integer by Positive Integer, gives negative.

(iii) Negative

Q.7 State which is greater.

(i) $(8+9)\times 10$ and $8+9\times 10$ (ii) $(8-9)\times 10$ and $8-9\times 10$

(iii) $\{(-2)-5\}\times(-6)$ and $(-2)-5\times(-6)$.

Solution: (i) $(8+9)\times 10 = 17\times 10 = 170$

$8+9\times 10 = 8+90 = 89$

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$\because 170 > 89$

$\Rightarrow (8+9) \times 10 > 8+9 \times 10$

(ii) $(8-9) \times 10 = (-1) \times 10 = -10$

also $8-9 \times 10 = 8-90 = -82$

$\because -10 > -82$

$\therefore (8-9) \times 10 > 8-9 \times 10$

(iii) $\{(-2)-5\} \times (-6) = (-7) \times (-6) = 42$

$(-2)-5 \times (-6) = -2-5 \times -6 = -2+30 = 28$

$\because 42 > 28$

$\therefore \{(-2)-5\} \times (-6) > (-2)-5 \times (-6)$

Q.8 (i) If $a \times (-1) = -30$, is the integer 'a' positive or negative?

(ii) If $a \times (-1) = 30$, is the integer 'a' positive or negative.

Solution : (i) $\because$ The product of negative integer by positive integer gives negative Integer

$\therefore$ 'a' should be positive.

(ii) $\because$ Product of two negative integers is positive therefore 'a' should be negative.

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Q.9 Verify the following:

(i) $19 \times \{7+(-3)\} = 19 \times 7 + 19 \times (-3)$

(ii) $(-23)\{(-5)+(+19)\} = (-23) \times (-5) + (-23) \times (+19)$

Solution: (i) $19 \times \{7+(-3)\} = 19 \times 7 + 19 \times (-3)$

LHS: $19 \times \{7+(-3)\} = 19(7-3)$

$= 19 \times 4 = 76$

RHS: $19 \times 7 + 19 \times (-3) = 133 - 57 = 76$

$\therefore$ LHS = RHS

(ii) $(-23)\{(-5)+(+19)\} = (-23) \times (-5) + (-23) \times (19)$

LHS: $(-23)\{(-5)+19\} = (-23)\{-5+19\}$

$= (-23) \times (14) = -322$

RHS $(-23) \times (-5) + (-23) \times 19$

$= 115 + (-437) = -322$

$\therefore$ LHS = RHS

Q.10 Which of the following statements are true?

(i) The product of a positive and a negative integer is negative.

(ii) The product of three negative integers is a negative integer.

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(iii) Of the two integers, if one is negative, then their product must be positive.

(iv) For all non zero integers a and b, $a \times b$ is always greater than either a or b.

(v) The product of a negative and a positive integer may be zero.

(vi) There does not exist an integer b such that for $a > 1$, $a \times b = b \times a = b$

Solution: (i) True (ii) True (iii) False

(iv) false (v) false (vi) True.

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