



SACRED HEART SCHOOL

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Website: <http://www.sacredheartkoderma.org/>

Maths

Class – VII (17-April-2020)

Integers

9

EXAMPLE 8. A certain freezing process requires that room temperature be lowered from 40°C at the rate of 5°C per hour. What will be the room temperature 12 hours after the process begins?

Solution Temperature after n hours = $(40 - 5n)^{\circ}\text{C}$.
 \therefore temperature after 12 hours = $(40 - 5 \times 12)^{\circ}\text{C}$
 $= (40 - 60)^{\circ}\text{C} = -20^{\circ}\text{C}$.

Hence, the room temperature after 12 hours would be -20°C .

EXERCISE 1B

1. Multiply:

- | | | | |
|---------------------|--------------------|--------------------|-----------------------|
| (i) 16 by 9 | (ii) 18 by -6 | (iii) 36 by -11 | (iv) -28 by 14 |
| (v) -53 by 18 | (vi) -35 by 0 | (vii) 0 by -23 | (viii) -16 by -12 |
| (ix) -105 by -8 | (x) -36 by -50 | (xi) -28 by -1 | (xii) 25 by -11 |

2. Find each of the following products:

- | | | |
|-----------------------------------|----------------------------------|--------------------------------------|
| (i) $3 \times 4 \times (-5)$ | (ii) $2 \times (-5) \times (-6)$ | (iii) $(-5) \times (-8) \times (-3)$ |
| (iv) $(-6) \times 6 \times (-10)$ | (v) $7 \times (-8) \times 3$ | (vi) $(-7) \times (-3) \times 4$ |

3. Find each of the following products:

- | | |
|-------------------------------------------------------------|--------------------------------------------------------------|
| (i) $(-4) \times (-5) \times (-8) \times (-10)$ | (ii) $(-6) \times (-5) \times (-7) \times (-2) \times (-3)$ |
| (iii) $(-60) \times (-10) \times (-5) \times (-1)$ | (iv) $(-30) \times (-20) \times (-5)$ |
| (v) $(-3) \times (-3) \times (-3) \times \dots$ 6 times | (vi) $(-5) \times (-5) \times (-5) \times \dots$ 5 times |
| (vii) $(-1) \times (-1) \times (-1) \times \dots$ 200 times | (viii) $(-1) \times (-1) \times (-1) \times \dots$ 171 times |

4. What will be the sign of the product, if we multiply 90 negative integers and 9 positive integers?

5. What will be the sign of the product, if we multiply 103 negative integers and 65 positive integers?

6. Simplify:

- | | |
|-----------------------------------------------|-----------------------------------------------|
| (i) $(-8) \times 9 + (-8) \times 7$ | (ii) $9 \times (-13) + 9 \times (-7)$ |
| (iii) $20 \times (-16) + 20 \times 14$ | (iv) $(-16) \times (-15) + (-16) \times (-5)$ |
| (v) $(-11) \times (-15) + (-11) \times (-25)$ | (vi) $10 \times (-12) + 5 \times (-12)$ |
| (vii) $(-16) \times (-8) + (-4) \times (-8)$ | (viii) $(-26) \times 72 + (-26) \times 28$ |

7. Fill in the blanks:

- | | |
|------------------------------------------------------------------------|--------------------------------------------|
| (i) $(-6) \times (\dots) = 6$ | (ii) $(-18) \times (\dots) = (-18)$ |
| (iii) $(-8) \times (-9) = (-9) \times (\dots)$ | (iv) $7 \times (-3) = (-3) \times (\dots)$ |
| (v) $\{(-5) \times 3\} \times (-6) = (\dots) \times \{3 \times (-6)\}$ | (vi) $(-5) \times (\dots) = 0$ |

8. In a class test containing 10 questions, 5 marks are awarded for every correct answer and (-2) marks are awarded for every incorrect answer and 0 for each question not attempted.

- Ravi gets 4 correct and 6 incorrect answers. What is his score?
- Reenu gets 5 correct and 5 incorrect answers. What is her score?
- Heena gets 2 correct and 5 incorrect answers. What is her score?

9. Which of the following statements are true and which are false?

- The product of a positive and a negative integer is negative.
- The product of two negative integers is a negative integer.
- The product of three negative integers is a negative integer.
- Every integer when multiplied with -1 gives its multiplicative inverse.