

CHAPTER 3

Four operations with integers



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UNIT 1: Addition of integers

QUESTION 1 Find the sum of the following (use a number line if necessary).

- a $8 + 3 =$ _____ b $7 + -2 =$ _____ c $6 + 5 =$ _____
d $12 + -3 =$ _____ e $5 + 8 =$ _____ f $3 + -4 =$ _____
g $12 + 2 =$ _____ h $10 + -2 =$ _____ i $12 + 14 =$ _____

QUESTION 2 Find each sum.

- a $7 + 6 =$ _____ b $9 + -5 =$ _____ c $23 + 8 =$ _____
d $7 + -3 =$ _____ e $3 + 21 =$ _____ f $15 + -2 =$ _____
g $3 + 9 =$ _____ h $5 + -7 =$ _____ i $52 + 2 =$ _____

QUESTION 3 Add the following.

- a $2 + 3 =$ _____ b $8 + -5 =$ _____ c $13 + 6 =$ _____
d $-2 + -3 =$ _____ e $9 + 21 =$ _____ f $7 + -5 =$ _____
g $9 + 18 =$ _____ h $2 + -4 =$ _____ i $-9 + 18 =$ _____

QUESTION 4 Find the answers to these additions.

- a $10 + 14 =$ _____ b $-3 + -2 =$ _____ c $-7 + 22 =$ _____
d $9 + -2 =$ _____ e $-6 + 42 =$ _____ f $-9 + -5 =$ _____
g $4 + 8 =$ _____ h $-8 + -3 =$ _____ i $-6 + 14 =$ _____

QUESTION 5 Find the values of the following.

- a $-3 + 6 + 8 =$ _____ b $12 + -4 =$ _____ c $-16 + 31 =$ _____
d $-15 + 10 =$ _____ e $-8 + 16 =$ _____ f $-7 + -6 =$ _____
g $-11 + 9 + 2 =$ _____ h $-10 + -5 + -2 =$ _____ i $-12 + 15 =$ _____

QUESTION 6 Find the missing number.

- a $12 + \underline{\hspace{2cm}} = 21$ b $\underline{\hspace{2cm}} + -3 = 12$ c $-8 + 14 = \underline{\hspace{2cm}}$
d $6 + \underline{\hspace{2cm}} = -9$ e $-6 + 10 = \underline{\hspace{2cm}}$ f $8 + \underline{\hspace{2cm}} = -7$
g $15 + \underline{\hspace{2cm}} = 29$ h $(-8) + -4 = \underline{\hspace{2cm}}$ i $9 + 11 = \underline{\hspace{2cm}}$

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UNIT 2: Subtraction of integers

QUESTION 1 Find the answers for the following questions.

- a** $6 - 2 =$ _____ **b** $8 - -3 =$ _____ **c** $9 - 6 =$ _____
d $9 - -1 =$ _____ **e** $17 - 5 =$ _____ **f** $18 - -10 =$ _____
g $8 - 15 =$ _____ **h** $16 - -6 =$ _____ **i** $25 - 8 =$ _____

QUESTION 2 Complete these subtractions (use a number line if necessary).

- a** $13 - 2 =$ _____ **b** $28 - -3 =$ _____ **c** $9 - 4 =$ _____
d $15 - -3 =$ _____ **e** $18 - 4 =$ _____ **f** $82 - -5 =$ _____
g $19 - 4 =$ _____ **h** $56 - -2 =$ _____ **i** $15 - 6 =$ _____

QUESTION 3 Find each difference.

- a** $-17 - 4 =$ _____ **b** $-8 - -2 =$ _____ **c** $-10 - 3 =$ _____
d $-15 - -3 =$ _____ **e** $-6 - 4 =$ _____ **f** $-9 - -3 =$ _____
g $-10 - 7 =$ _____ **h** $-12 - -8 =$ _____ **i** $-7 - 21 =$ _____

QUESTION 4 Find the answers for the following subtractions.

- a** $-4 - 13 =$ _____ **b** $-5 - -3 =$ _____ **c** $-5 - 12 =$ _____
d $-6 - -2 =$ _____ **e** $-7 - 16 =$ _____ **f** $-8 - -3 =$ _____
g $-8 - 24 =$ _____ **h** $-6 - -4 =$ _____ **i** $-10 - 15 =$ _____

QUESTION 5 Find the values of the following.

- a** $-8 - 18 =$ _____ **b** $-18 - -4 =$ _____ **c** $56 - 13 =$ _____
d $-17 - -9 =$ _____ **e** $-23 - 23 =$ _____ **f** $-15 - -12 =$ _____
g $-7 - 17 =$ _____ **h** $-16 - -6 =$ _____ **i** $-19 - 21 =$ _____

QUESTION 6 Simplify the following.

- a** $8 - 12 =$ _____ **b** $-5 - 2 =$ _____ **c** $-5 - 7 =$ _____
d $8 - -6 =$ _____ **e** $-5 - 9 =$ _____ **f** $-5 - -3 =$ _____
g $-9 - 9 =$ _____ **h** $-7 - 10 =$ _____ **i** $6 - 15 =$ _____

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UNIT 3: Multiplication of integers

QUESTION 1 Multiply the following.

- a $5 \times 2 =$ _____ b $12 \times -7 =$ _____ c $15 \times 10 =$ _____
d $8 \times -3 =$ _____ e $2 \times 6 =$ _____ f $12 \times -8 =$ _____
g $6 \times 9 =$ _____ h $6 \times -15 =$ _____ i $13 \times 4 =$ _____

QUESTION 2 Work out the following.

- a $3 \times 2 =$ _____ b $5 \times -3 =$ _____ c $21 \times 9 =$ _____
d $15 \times -8 =$ _____ e $11 \times 4 =$ _____ f $6 \times -7 =$ _____
g $9 \times 3 =$ _____ h $9 \times -7 =$ _____ i $40 \times 9 =$ _____

QUESTION 3 Find the answers to the following.

- a $-3 \times 12 =$ _____ b $-4 \times -3 =$ _____ c $-5 \times 11 =$ _____
d $-5 \times -9 =$ _____ e $-6 \times 1 =$ _____ f $-7 \times -20 =$ _____
g $-3 \times 8 =$ _____ h $-3 \times -9 =$ _____ i $-4 \times 5 =$ _____

QUESTION 4 Simplify.

- a $-3 \times 7 =$ _____ b $-4 \times -6 =$ _____ c $-8 \times 4 =$ _____
d $-2 \times -12 =$ _____ e $-3 \times 15 =$ _____ f $-5 \times -12 =$ _____
g $-6 \times 10 =$ _____ h $-4 \times -8 =$ _____ i $-6 \times 8 =$ _____

QUESTION 5 Find each product.

- a $4 \times 8 \times 2 =$ _____ b $-6 \times -3 \times 1 =$ _____ c $-7 \times 5 \times 10 =$ _____
d $9 \times -2 \times -2 =$ _____ e $-4 \times 5 \times -3 =$ _____ f $2 \times -3 \times 4 =$ _____
g $6 \times 8 \times -1 =$ _____ h $-3 \times -10 \times -7 =$ _____ i $-1 \times -2 \times -5 \times -3 =$ _____

QUESTION 6 Complete the following tables.

a

\times	7	11	-4
3			
-7			

b

\times	-5	-9	8
7			
-10			

c

\times	12	-25	-100
-4			
12			

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UNIT 4: Division of integers

QUESTION 1 Divide the following.

- a** $24 \div 4 =$ _____ **b** $42 \div -6 =$ _____ **c** $54 \div 9 =$ _____
d $36 \div -9 =$ _____ **e** $28 \div 7 =$ _____ **f** $21 \div -3 =$ _____
g $16 \div 8 =$ _____ **h** $55 \div -5 =$ _____ **i** $48 \div 8 =$ _____

QUESTION 2 Work out the following divisions.

- a** $12 \div 2 =$ _____ **b** $24 \div -8 =$ _____ **c** $15 \div 5 =$ _____
d $-20 \div 4 =$ _____ **e** $-45 \div -5 =$ _____ **f** $28 \div -7 =$ _____
g $18 \div 9 =$ _____ **h** $-120 \div 10 =$ _____ **i** $21 \div 3 =$ _____

QUESTION 3 Simplify the following.

- a** $-27 \div 3 =$ _____ **b** $-24 \div -6 =$ _____ **c** $36 \div 12 =$ _____
d $-27 \div -9 =$ _____ **e** $-63 \div 7 =$ _____ **f** $5 \div -5 =$ _____
g $33 \div -11 =$ _____ **h** $-36 \div -3 =$ _____ **i** $27 \div 3 =$ _____

QUESTION 4 If $a = 2$, $b = -4$, $c = 8$ and $d = -24$, find the value of:

- a** $d \div b$ _____ **b** $b \div a$ _____ **c** $d \div c$ _____
d $ab \div c$ _____ **e** $bc \div a$ _____ **f** $d \div ab$ _____
g $a^2 \div b$ _____ **h** $b^2 \div c$ _____ **i** $ad \div b^2$ _____

QUESTION 5 Fill in each missing number.

- a** $-48 \div \text{_____} = -8$ **b** $-50 \div \text{_____} = 10$ **c** $36 \div \text{_____} = -4$
d $\text{_____} \div -5 = -7$ **e** $-49 \div 7 = \text{_____}$ **f** $\text{_____} \div 10 = -8$
g $-300 \div -50 = \text{_____}$ **h** $\text{_____} \div -6 = 4$ **i** $-96 \div \text{_____} = 96$

QUESTION 6 Simplify the following.

- a** $-45 \div -9 \div -1$ _____ **b** $-60 \div 3 \div -5$ _____ **c** $-20 \div -2 \div -2$ _____
d $36 \div -4 \div -3$ _____ **e** $120 \div -12 \div 2$ _____ **f** $-60 \div -20 \div -3$ _____
g $48 \div 4 \div -6$ _____ **h** $40 \div -4 \div -2$ _____ **i** $-12 \div -6 \div -2$ _____

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UNIT 5: Mixed questions

QUESTION 1 Find answers to the following.

- a** $-2 - 4 =$ _____ **b** $-6 + 5 =$ _____ **c** $-2 + 9 =$ _____
d $3 - 7 =$ _____ **e** $2 - -8 =$ _____ **f** $3 + -5 =$ _____
g $-4 - -3 =$ _____ **h** $-2 + -10 =$ _____ **i** $-5 - -12 =$ _____

QUESTION 2 Find the value of the following.

- a** $-4 \times -8 =$ _____ **b** $-16 \div -8 =$ _____ **c** $54 \div -6 =$ _____
d $-3 \times 7 =$ _____ **e** $11 \times -7 =$ _____ **f** $-56 \div 7 =$ _____
g $-2 \times 5 \times -9 =$ _____ **h** $-100 \div -4 =$ _____ **i** $-3 \times -4 \times -6 =$ _____

QUESTION 3 Work out the following.

- a** $-3 + -5 =$ _____ **b** $-3 \times -5 =$ _____ **c** $10 \div -2 =$ _____
d $10 - -2 =$ _____ **e** $-15 - 13 =$ _____ **f** $-12 \div -4 =$ _____
g $-6 + 17 =$ _____ **h** $-8 + 8 =$ _____ **i** $-8 \times 8 =$ _____

QUESTION 4 Simplify the following.

- a** $(3 + 4) \times -2 =$ _____ **b** $5 \times (4 - 5) =$ _____ **c** $(-6 + 4) \times 8 =$ _____
d $-20 \div -5 \div -2 =$ _____ **e** $12 \times 3 \div -9 =$ _____ **f** $-3 - 7 - 8 =$ _____
g $(5 + -5) \times -38 =$ _____ **h** $(-2 - 5) \times -7 =$ _____ **i** $(-4 + 12) \div -2 =$ _____

QUESTION 5 Fill in each missing number.

- a** $9 +$ _____ $= 7$ **b** _____ $\div 7 = -6$ **c** $-2 -$ _____ $= -3$
d _____ $\times -2 = -100$ **e** _____ $+ 8 = 3$ **f** _____ $- 9 = -1$
g $-81 \div$ _____ $= 9$ **h** $-4 -$ _____ $= 5$ **i** _____ $+ 6 = -2$

QUESTION 6 Complete the following tables.

a

+	3	-7	-9	12	-15
-1					
6					
-8					

b

\times	-4	5	-10	8	-9
-5					
11					
-6					