

### **MATHS**

### **BOOKS - ICSE**

### **PLAYING WITH NUMBERS**

**Example** 

**1.** Is the sum of two digit numbers 62 and 26 divisible by 8 and 11 ? Explain.



2. Find the quotient when 83 - 38 is divided by
(i) 9 (ii) 5.



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**3.** Find the quotient when 821 + 218 + 182 is divided by 111. Will the sum also be divisible by 11 ? Explain.



**4.** Solve the following cryptarithms:



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 $\boldsymbol{A}$ 

+A

+A

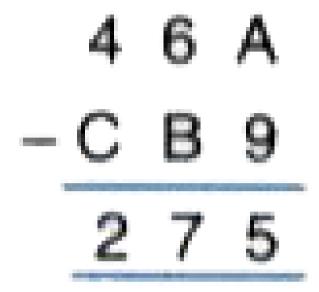
**5.** Find A and B in the addition:

BA

\_ \_

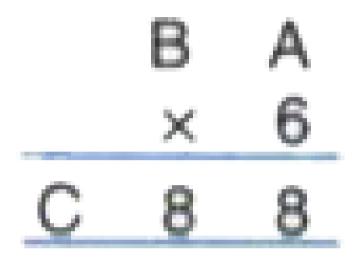


6. Find the values of A,B and C





7. Find the values of A and B.





**8.** If 42x is divisible by 9, find the value of digit

Χ.



**9.** If 5x21 is divisible by 9, find the value of digit x.



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**10.** If 24a5 is a multiple of 3 i.e. divisible by 3, find the value of digit a.



11. If 3x72 is divisible by 3, find the value of x.



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**12.** 21 y8 is a multiple of 6, find the value of digit y.



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**13.** 13z4 is divisible by 6, find the value of digit z.



**14.** 2y5 is divisible by 11, find the value of digit y.



**15.** 67x19 is a multiple of 11. Find all possible values of digit x.



**16.** Find the value of digit z, if 12z4 is divisible by 4.



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## Exercise 5 A

- 1. Write the quotient when the sum of 73 and
- 37 is divided by:
- (i) 11, (ii) 10



- 2. Write the quotient when the sum of 94 and
- 49 is divided by:
- (i) 11, (ii) 13



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- 3. Find the quotient when 73 37 is divided by:
- (i)9 (ii) 4



**4.** If a = b, show that abc = bac.



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5. Find the quotient when 94 - 49 is divided by:

(i) 9 (ii) 5



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**6.** Show that 527 + 752 + 275 is exactly divisible by 14.



**7.** if a>c, show that abc - cba = 99(a - c)



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**8.** If c>a, show that cba-abc=99(c-a)



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**9.** If a=c, show that cba-abc=0



## Exercise 5 B

- 3A
- 1

+25

- B2
- \_ \_











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**A** 1  $+1\,\mathrm{B}$ 

 $B_0$ 





- 2 A B +AB1 B 18

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- 12A+6 A B
  - A 0 9



5.









## 7. Find value of A & B:

AΒ

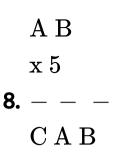
x 6

\_ \_ \_

\_ \_ \_

BBB







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x 5CAB

A B





- 8 A 5 +94A**10.** — — 1 A 3 3

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- 6 A B 5 +D58C
- **11.** — 9351



### **Exercise 5 C**

**1.** Find which of the following numbers are divisible by 2:

(i) 192 (ii) 1660 (iii) 1101 (iv) 2079



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**2.** Find which of the following numbers are divsible by 3:

(i) 261 (ii) 777

(iii) 6657 (iv) 2574

- A. (i) and (ii)
- B. (iii) and (iv)
- C. All
- D. None of these

### **Answer: All**



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**3.** Find which of the following numbers are divisible by 4:

(i) 360 (ii) 3180

(iii) 5348 (iv) 7756

A. (i) and (ii)

B. (iii) and (iv)

C. All

D. None of these

**Answer: C** 



**4.** Find which of the following numbers are divisible by 5:

(i) 3250 (ii) 5557

(iii) 39255 (iv) 8204

A.(i)

B.(ii)

 $\mathsf{C}.\left(i
ight)$  and  $\left(iii
ight)$ 

D.(iv)

#### **Answer: C**



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**5.** Find which of the following numbers are divisible by 10 :

(i) 5100 (ii) 4612

(iii) 3400 (iv) 8399



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**6.** Find which of the following numbers are divisible by 11:

(i) 2563 (ii) 8307 (iii) 95635



## **Exercise 5 D**

1. For what value of digit x, is

1x5 divisible by 3?



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**2.** 31x5 divisible by 3 ?

A. 0, 3, 6 or 9

- B. 0, 4, 8 or 7
- $\mathsf{C.}\ 1,\, 3,\, 5\ \mathsf{or}\ 7$
- D. 2, 4, 6 or 8

### **Answer: A**



- **3.** 28x6 a multiple of 3 ?
  - A. 2, 5 or 8
  - $B.\,3,\,5$  or 7

C. 3, 7 or 8

D. 4, 8 or 9

### **Answer: A**



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**4.** 24x divisible by 6 ?

**A.** 3 or 6

B. 2 or 8

 $\mathsf{C.}\,0\,\mathsf{or}\,8$ 

 $\mathsf{D.}\,0\,\mathsf{or}\,6$ 

#### **Answer: D**



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## **5.** 3x26 a multiple of 6?

 $\mathsf{A.}\ 1,\ 4\ \mathsf{or}\ 7$ 

 $\mathsf{B.}\,2,\,5\,\mathsf{or}\,9$ 

 $\mathsf{C.}\,3,\,5\,\mathsf{or}\,7$ 

 $\mathsf{D.}\,3,\,7\,\mathsf{or}\,9$ 

#### **Answer: A**



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### **6.** 42x8 divisible by 4?

A. 3, 1, 6, 8 and 9

B. 1, 2, 5, 7 and 8

C. 3, 4, 6, 8 and 9

D. 0, 2, 4, 6 and 8

#### **Answer: D**

**7.** 142x is a multiple of 4?

A. 1, 3 or 4

B. 0, 4 or 8

 $\mathsf{C.}\ 2,\, 5\ \mathsf{or}\ 7$ 

 $\mathsf{D.}\,3,\,5\,\mathsf{or}\,9$ 

**Answer: B** 



**8.** 7x34 divisible by 9?

**A.** 4

B. 5

**C**. 6

D. 7

#### **Answer: A**



**9.** 5x555 a multiple of 9?

**A**. 5

**B**. 6

C. 7

D. 8

**Answer: C** 



**10.** 3x2 divisible by 11?

**A.** 5

**B**. 6

C. 7

D. 8

**Answer: A** 



**11.** 5x2 a multiple of 11 ?

**A.** 6

B. 7

**C**. 8

D. 9

**Answer: B** 

