Exercise 2B

Q1

Answer :

A number is divisible by 2 if its ones digit is 0, 2, 4, 6 or 8.
(i) Since the digit in the ones place in 26250 is 0, it is divisible by 2
(ii) Since the digit in the ones place in 69435 is not 0, 2, 4, 6 or 8, it is not divisible by 2.
(iii) Since the digit in the ones place in 59628 is 8, it is divisible by 2.
(iv) Since the digit in the ones place in 789403 is not 0, 2, 4, 6, or 8, it is not divisible by 2.
(v) Since the digit in the ones place in 357986 is 6, it is divisible by 2.
(vi) Since the digit in the ones place in 367314 is 4, it is divisible by 2.

Q2

Answer :

A number is divisible by 3 if the sum of its digits is divisible by 3.
(i) 733 is not divisible by 3 because the sum of its digits, 7 + 3 + 3, is 13, which is not divisible by 3.
(ii) 10038 is divisible by 3 because the sum of its digits, 1 + 0 + 0 + 3 + 8, is 12, which is divisible by 3.
(iii) 20701 is not divisible by 3 because the sum of its digits, 2 + 0 + 7 + 0 + 1, is 10, which is not divisible by 3.
(iv) 524781 is divisible by 3 because the sum of its digits, 5 + 2 + 4 + 7 + 8 + 1, is 27, which is divisible by 3.
(v) 79124 is not divisible by 3 because the sum of its digits, 7 + 9 + 1 + 2 + 4, is 23, which is not divisible by 3.
(vi) 872645 is not divisible by 3 because the sum of its digits, 8 + 7 + 2 + 6 + 4 + 5, is 32, which is not divisible by 3.

Q3

Answer :

A number is divisible by 4 if the number formed by the digits in its tens and units place is divisible by 4.

(i) 618 is not divisible by 4 because the number formed by its tens and ones digits is 18, which is not divisible by 4.
(ii) 2314 is not divisible by 4 because the number formed by its tens and ones digits is 14, which is not divisible by 4.
(iii) 63712 is divisible by 4 because the number formed by its tens and ones digits is 12, which is divisible by 4.
(iv) 35056 is divisible by 4 because the number formed by its tens and ones digits is 56, which is divisible by 4.
(v) 946126 is not divisible by 4 because the number formed by its tens and ones digits is 26, which is not divisible by 4.
(vi) 810524 is divisible by 4 because the number formed by its tens and ones digits is 24, which is divisible by 4.

Q4

Answer :

A number is divisible by 5 if its ones digit is either 0 or 5.

(i) 4965 is divisible by 5, because the digit at its ones place is 5.

(ii) 23590 is divisible by 5, because the digit at its ones place is 0.

(iii) 35208 is not divisible by 5, because the digit at its ones place is 8.

(iv) 723405 is divisible by 5, because the digit at its ones place is 5.

(v) 124684 is not divisible by 5, because the digit at its ones place is 4.

(vi) 438750 is divisible by 5, because the digit at its ones place is 0.

Q5

Answer :

A number is divisible by 6 if it is divisible by both 2 and 3.

i) Since 2070 is divisible by 2 and 3, it is divisible by 6.
Checking the divisibility by 2: Since the number 2070 has 0 in its units place, it is divisible by 2.
Checking the divisibility by 3: The sum of the digits of 2070, 2 + 0 + 7 + 0, is 9, which is divisible by 3. So, it is divisible by 3.

(ii) Since 46523 is not divisible by 2, it is not divisible by 6.

Checking the divisibility by 2: Since the number 46523 has 3 in its units place, it is not divisible by 2.

(iii) Since 71232 is divisible by both 2 and 3, it is divisible by 6.

Checking the divisibility by 2: Since the number has 2 in its units place, it is divisible by 2.
Checking the divisibility by 3: The sum of the digits of the number, 7 + 1 + 2 + 3 + 2, is 15, which is divisible by 3. So, the number is divisible by 3.

(iv) Since 934706 is not divisible by 3, it is not divisible by 6.
Checking the divisibility by 3: Since the sum of the digits of the number, 9 + 3 + 4 + 7 + 0 + 6, is 29, which is not divisible by 3. So, the number is not divisible by 3.

(v) Since 251780 is not divisible by 3, it is not divisible by 6.
Checking the divisibility by 3: The sum of the digits of the number, 2 + 5 + 1 + 7 + 8 + 0, is 23, which is not divisible by 3. So, the number is not divisible by 3.

(vi) Since 872536 is not divisible by 3, it is not divisible by 6.
Checking the divisibility by 3: The sum of the digits of the number, 8 + 7 + 2 + 5 + 3 + 6, is 31, which is not divisible by 3. So, the number is not divisible by 3.

Q6

Answer :

To determine if a number is divisible by 7, double the last digit of the number and subtract it from the number formed by the remaining digits. If their difference is a multiple of 7, the number is divisible by 7.

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