

1. yes; ends in 0
2. no; does not end in 0, 2, 4, 6, or 8
3. yes; ends in 5
4. yes; ends in 0
5. yes; ends in 0
6. no; does not end in 0, 2, 4, 6, or 8
7. yes; ends in 8
8. no; does not end in 0
9. no; sum of digits is not divisible by 9
10. yes; sum of digits is divisible by 3
11. yes; sum of digits is divisible by 9
12. yes; sum of digits is divisible by 3
13. no; sum of digits is not divisible by 9
14. yes; sum of digits is divisible by 9
15. yes; sum of digits is divisible by 3
16. yes; sum of digits is divisible by 3
17. 1, 2, 4
18. 1, 2, 4, 8
18. 1, 23
20. 1, 3, 5, 15, 25, 75
21. 1 row of 32; 2 rows of 16; 4 rows of 8
22. 3;  $1 + 1 + 1 = 3$ ; 3 is divisible by 3.
23. none
24. 2, 3, 9; the number ends in 8;  $2 + 8 + 8 = 18$ ; 18 is divisible by 3 and 9.
25. 2, 3, 5, 10; the number ends in 0;  $3 + 0 + 0 = 3$ ; 3 is divisible by 3.
26. 2; the number ends in 2.



45. a.

Number	Last two digits	Are last two digits divisible by 4?	Is the number divisible by 4?
136	36	Yes	Yes
1,268	68	Yes	Yes
314	14	No	No
1,078	■ 78	■ No	■ No
696	■ 96	■ Yes	■ Yes

b. An integer is divisible by 4 if its last 2 digits are divisible by 4.

46. Answers may vary. Sample: 25, 35, 45

47. Answers may vary. Sample: 21, 24, 33

48. Answers may vary. Sample: 30, 60, 120

49. Answers may vary. Sample:  $a + 1$  is not divisible by 2. Dividing by 2 will leave a remainder of 1.