🔢 Place Value & Powers

Name: Grade: 5 Date:

Read, compare and manipulate large numbers. Use powers of 10 to shift digits, round to chosen places, and model real-world data sizes.

Part 1 · Read & Write

1. Write in standard form: six hundred five thousand thirty-two = _____

2. Expanded form: 803,407 = _____

3. Word form: 9,020,050 = _____

4. Value of the 7 in 57,864,903 = _____

5. Digit in the ten-thousands place of 3,945,210 = _____

6. Which is greater: 6,090,500 or 6,089,999? _____

Part 2 · Compare & Order

7. Use <, >, = : 705,300 ___ 705,030

8. Order least→greatest: 4,020; 3,998; 4,200

9. Circle largest: 8,009,120 | 8,090,012 | 8,900,012

10. Which two numbers differ by less than 500: 12,450; 12,118; 12,910

11. Closer to 400,000: 399,120 or 401,020?

12. Which pair sums just over 1,000,000: 600,400 + 399,700 OR

550,000 + 450,050?

Part 3 · Powers of 10 Shifts

13. 42 × 10 = _____

14. 42 × 100 = _____

15. 5,600 ÷ 10 = _____

16. 5,600 ÷ 100 = _____

17. 8.2 × 10 = _____

18. 8.2 ÷ 100 = _____

Part 4 · Rounding

19. Round 487,612 to nearest thousand = _____

20. Round 487,612 to nearest ten thousand = _____

21. Round 6,049 to nearest hundred = _____

22. Round 6,049 to nearest ten = _____

23. Which is closer to 50,000: 49,180 or 50,720?

24. A stadium seats 78,342. Give a quick estimate for planning (nearest thousand) = _____

Part 5 · Mixed Applications

25. A factory made 230,450 tablets last year and 10 times that this year. Approximate this year's production = _____

26. A rocket travels 8,250 m/s. What is 8,250 × 100 (scientists scale) = _____

27. Population in a region: 902,130. Write in expanded form = _____

28. Two cities: 1,205,400 and 1,198,900. Difference (round each to nearest thousand first) ≈ _____

29. A sensor logs 5.6 MB per minute. About how many MB in 10 minutes (mental) = _____

30. 3.45 × 100 = _____ ; 3.45 ÷ 10 = _____

Part 6 · Word Problems & Reflection

31. A company produces 62,400 clips per day. About how many in 30 days (use 60,000 × 30) = _____

32. A drone battery drop went from 4,820 m to 480 m (÷10). Percentage of original altitude (approx fraction) = _____

33. A number has a 7 in the hundred-thousands place and zeros elsewhere except a 9 in tens place. Write it = _____

34. Explain (≤6 words) why rounding helps decisions: _____

35. Choose a better target: 403,920 ≈ 404,000 or 400,000 (which is closer?) _____

36. Reflection: Place value skill easiest today? _____

Reflections (#34, #36) open answers.

Answer Key

1. 605,032
2. 800,000+3,000+400+7
3. nine million twenty thousand fifty
4. 70,000,000
5. 5
6. 6,090,500
7. >
8. 3,998, 4,020, 4,200
9. 8,900,012
10. 12,450 & 12,118
11. 399,120
12. 600,400+399,700 (≈1,000,100)
13. 420
14. 4,200
15. 560
16. 56
17. 82
18. 0.082
19. 488,000
20. 490,000
21. 6,000
22. 6,050
23. 49,180
24. 78,000
25. ≈2,304,500 (×10)
26. 825,000
27. 900,000+2,000+100+30
28. ≈6,500 (1,205,000−1,199,000)
29. ≈56
30. 345 ; 0.345
31. ≈1,800,000 (60,000×30)
32. ≈1/10
33. 700,0090 (or 700,090?) => 700,090 (7 in hundred-thousands + 9 tens)
34. e.g. "Quicker planning"
35. 404,000
36. Varies

Accept equivalent expanded forms; #33 number interpretation: 7 in hundred-thousands → 700,000 + 90 = 700,090.