



Estimation & Mental Math Quest

Name: _____

Grade: 4

Date: _____

Use rounding, compatible numbers, front-end addition, compensation, and benchmarks to find fast reasonable answers. Show exact math only when asked.

Part 1 · Rounding to Nearest 10 / 100 ROUND

1. Round 348 to nearest 10 = _____

2. Round 348 to nearest 100 = _____

3. Round 1,762 to nearest 100 = _____

4. Round 1,762 to nearest 10 = _____

5. Round 5,049 to nearest 100 = _____

6. Round 5,049 to nearest 10 = _____

Part 2 · Front-End & Compatible Numbers ADD

7. Estimate $387 + 412 \approx$ _____

8. Estimate $2,980 + 4,020 \approx$ _____

9. Estimate $5,999 + 2,001 \approx$ _____

10. Estimate $3,250 + 1,740 \approx$ _____

11. Choose better quick sum for $199 + 602$ (800 / 900) = _____

12. Compatible: $25 \times 4 \times 10 \approx$ _____

Front-end: add leading digits then adjust. Compatible numbers: pick easy-to-multiply / add numbers close to

Part 3 · Differences & Compensation

SUBTRACT

13. Estimate $803 - 398 \approx$ _____
(use round both)

14. Estimate $1,002 - 497 \approx$ _____

15. $6,000 - 1,998 \approx$ _____

16. $4,950 - 2,050 \approx$ _____

17. Better estimate for $2,999 - 1,501$
($1,500 / 1,400$) = _____

18. Compensation: $500 - 198$ (think
 $500 - 200 + 2$) $\approx$ _____

Part 4 · Products & Division Estimates

MULT/DIV

19. $49 \times 8 \approx (50 \times 8) =$ _____

20. $198 \times 3 \approx (200 \times 3) =$ _____

21. $32 \times 11 \approx (30 \times 10) =$ _____

22. $72 \div 9 \approx$ _____ (exact easy)

23. $198 \div 2 \approx (200 \div 2) =$ _____

24. $1,005 \div 5 \approx (1,000 \div 5) =$ _____

Part 5 · Reasonableness & Benchmarks

CHECK

25. A student said $402 + 599 \approx 900$.
Reasonable? (Yes/No) _____

26. 51% of 100 $\approx$ _____
(benchmark)

27. If $3/4$ hour ≈ 45 min, then $1/2$
hour $\approx$ _____ min

28. 15 cookies shared by 4 $\approx$ _____
each (whole number)

29. A class collects 298, 305, 301 cans. Total $\approx$ _____

30. $7,000 + 699 + 305 \approx$ _____

Part 6 · Word Problems & Reflection THINK

31. A bus travels 198 km + 205 km + 201 km. Total $\approx$ _____ km

32. A store sells 399 + 610 + 598 pencils. Total $\approx$ _____

33. Explain (≤ 6 words) why estimating before solving helps.

34. $2,400 - 1,199 \approx$ _____

35. $48 \times 19 \approx$ _____ (round 19)

36. Reflection: Which estimating strategy felt easiest? (round / front-end / compatible / compensation) _____

Reflection (#36) open—accept any sensible response; #33 short phrases vary.

Answer Key

1. 350
2. 300
3. 1,800
4. 1,760
5. 5,000
6. 5,050
7. 800
8. 7,000
9. 8,000
10. 5,000
11. 800
12. 1,000
13. 400 (800-400)
14. 500 (1,000-500)
15. 4,000
16. 2,900
17. 1,500
18. 302 (500-200+2)
19. 400
20. 600
21. 300
22. 8
23. 100
24. 200
25. No ($\approx 1,000$)
26. 51
27. 30
28. 4
29. 900 ($\approx 300 \times 3$)
30. 8,000 (7,000+~700+~300)
31. 600 ($\approx 200+200+200$)
32. 1,600 ($\approx 400+600+600$)
33. Varies (e.g., "Check reasonableness")
34. 1,200 (2,400-1,200)
35. 1,000 ($\approx 50 \times 20$)
36. Varies

Accept close nearby estimates ($\pm$ one rounding step). #18 compensation shows mental adjustment. #35 any of 900-1,000 with reasoning acceptable ($48 \times 19 \approx 50 \times 20 = 1,000$ or $48 \times 20 = 960$).