



Fractions & Decimals Connect

Name: _____

Grade: 5

Date: _____

Convert, compare, and add/subtract fractions & decimals. Use benchmarks (0, 1/2, 1) to judge reasonableness and explain strategy choices.

Part 1 · Convert Fractions $\rightleftharpoons$ Decimals

1. $1/2 =$ _____

2. $3/5 =$ _____

3. $7/10 =$ _____

4. $9/20 =$ _____

5. $0.08 =$ _____ (simplest)

6. $0.125 =$ _____ (simplest)

Part 2 · Compare & Order

7. Larger: 0.6 or $5/8$? _____

8. Order least $\rightarrow$ greatest: 0.75, $2/3$, 0.7

9. $4/5$ ____ 0.82

10. Closer to 1: $9/10$ or 0.88?

11. 0.47 is slightly (less / more) than $1/2$

12. Sums over 1? $0.42 + 3/5$ or $0.45 + 0.51$ (choose set) _____

Part 3 · Equivalent & Simplify

13. $3/4 =$ _____/100

14. $12/20$ simplified = _____

15. $18/24$ simplified = _____

16. $40/50$ simplified = _____

17. $0.35 = \frac{\quad}{100}$
(simplify?)

18. $0.18 = \frac{\quad}{100} =$
_____ simplified

Part 4 · Add & Subtract (Unlike Denominators)

19. $1/3 + 1/6 =$ _____

20. $3/4 - 1/8 =$ _____

21. $2/5 + 3/10 =$ _____

22. $5/6 - 1/3 =$ _____

23. $7/12 + 1/4 =$ _____

24. $1 - 5/8 =$ _____

Part 5 · Mixed Context

FUEL 25. $0.4 \text{ L} + 1/5 \text{ L} =$ _____ L

TRAIL 26. $3/8 \text{ trail} + 0.25 =$ _____

RECIPE 27. Need 0.6 cup ; have $1/2$. More = _____ cup

CLASS 28. $5/8$ vs 0.55 solved. More? _____

TANK 29. $0.3 + 2/5 =$ _____

MONEY 30. $0.95 - 3/20 =$ _____

Part 6 · Word Problems & Reflection

GAME 31. $7/10 + 0.15 =$ _____

JUICE 32. $0.4 + 3/5$ L = _____ L

RUN 33. 0.75 km + $2/5$ km = _____ km

LEFT 34. $1 - (0.4 + 1/5) =$ _____

WHY 35. Why benchmarks help (≤ 6 words): _____

REFLECT 36. Skill easiest today? _____

Part 7 · Real-Life Mini Scenarios

DISCOUNT 37. \$28 shirt, $1/4$ off $\rightarrow$ discount \$ _____ ; sale \$ _____

RECIPE 38. $3/5$ L broth + 0.25 L cream = _____ L

DISTANCE 39. 0.6 km + $3/8$ km = _____ km

SURVEY 40. 18 of 50 $\rightarrow$ fraction _____ ; decimal _____

TIME 41. 45 min show, watched 0.4 : watched _____ min; left _____ min

RECYCLE 42. 12 plastic, 8 paper: paper fraction _____ ; decimal _____

Part 8 · Error Analysis & Strategy

ERROR 43. $3/5 + 2/10 = 5/15$ (student). Correct sum & mistake: _____ / _____

ERROR 44. $3/4 - 1/8$ misworked. Correct = _____ ; note: convert to eighths.

STRATEGY 45. Faster: $0.4 + 3/5$ convert which? (A decimal / B fraction). Choice & result = _____

BENCH 46. Larger: $0.48 + 1/3$ or $0.5 + 0.3$? _____ (reason)

SIMPLIFY 47. $5/12 + 7/18 =$ _____

ESTIMATE 48. Estimate then exact: $0.92 - 3/20 \approx$ _____ ; exact _____

Part 9 • Multi-Step Challenge

SAUCE 49. $3/8 + 0.15 + 1/4$ cup = _____ (decimal or fraction)

HYDRATE 50. $0.35 \text{ L} + 0.30 \text{ L} =$ _____ ; $> 2/3 \text{ L}$? (Yes/No)

SAVINGS 51. $2/5 + 0.28$ saved = _____ ; needed to 1 = _____

DATA 52. $12/40 + 0.30 =$ _____ (decimal)

COMPARE 53. Greater: $7/10 - 0.18$ or $0.9 - 2/5$? _____

BALANCE 54. $2/3 + \square = 1 - 0.15 \rightarrow \square =$ _____

Self-Check Rubric (Optional)

Skill	Got It	Almost	Review
Conversions	☐	☐	☐
Benchmarks	☐	☐	☐
Add/Sub Fractions	☐	☐	☐
Simplifying	☐	☐	☐
Error Analysis	☐	☐	☐
Multi-Step	☐	☐	☐

Answer Key

1. 0.5
2. 0.6
3. 0.7
4. 0.45
5. $\frac{2}{25}$
6. $\frac{1}{8}$
7. 0.6
8. $\frac{2}{3}$, 0.7, 0.75
9. <
10. $\frac{9}{10}$
11. less
12. $0.42 + 0.6 = 1.02$
13. 75
14. $\frac{3}{5}$
15. $\frac{3}{4}$
16. $\frac{4}{5}$
17. $\frac{35}{100}$ ($\frac{7}{20}$)
18. $\frac{18}{100} = \frac{9}{50}$
19. $\frac{1}{2}$
20. $\frac{5}{8}$
21. $\frac{7}{10}$
22. $\frac{1}{2}$
23. $\frac{5}{6}$
24. $\frac{3}{8}$
25. 0.6
26. $\frac{5}{8}$
27. 0.1
28. Class A
29. 0.7
30. 0.80
31. 0.85
32. 1.0
33. 1.15
34. 0.4
35. Varies
36. Varies
37. \$7 ; \$21
38. $\frac{17}{20}$ (0.85)

39. 0.975 (39/40)
40. $9/25$; 0.36
41. 18 ; 27
42. $2/5$; 0.4
43. $4/5$; added denominators
44. $5/8$
45. A ; 1.0
46. $0.48 + 1/3 \approx 0.81$ vs 0.8 $\rightarrow$ first
47. $29/36$
48. 0.77 ; 0.77
49. 0.775 (31/40)
50. 0.65 ; No
51. 0.68 ; 0.32 (8/25)
52. 0.60
53. 0.52 vs 0.5 $\rightarrow$ first
54. $11/60$

Equivalent forms accepted (e.g., $0.775 = 31/40$). Estimation answers within sensible rounding accepted. Reflection responses vary.

- 42: $8/20 = 2/5$; 0.4
- 43. $3/5 + 2/10 = 3/5 + 1/5 = 4/5$ (error: added denominators)
- 44. $3/4 - 1/8 = 6/8 - 1/8 = 5/8$ (error: must convert to common 8)
- 45. A; $0.4 + 0.6 = 1.0$
- 46. Second ($0.48 + \sim 0.33 \approx 0.81$; $0.5 + 0.3 = 0.8$) reason: $1/3 \approx 0.33$
- 47. $5/12 + 7/18 \rightarrow$ LCM 36: $15/36 + 14/36 = 29/36$
- 48. Estimate: $0.92 - 0.15 \approx 0.77$; exact $0.92 - 0.15 = 0.77$
- 49. $3/8 + 0.15 + 1/4 = 0.375 + 0.15 + 0.25 = 0.775$ (31/40 if fraction, since $0.775 = 31/40$)
- 50. $0.35 + 0.30 = 0.65$; $> 2/3$? No ($0.65 < 0.666\dots$)
- 51. $2/5 = 0.4$; $0.4 + 0.28 = 0.68$; needed 0.32 (or 8/25)
- 52. $12/40 = 0.30$; $0.30 + 0.30 = 0.60$
- 53. $7/10 - 0.18 = 0.70 - 0.18 = 0.52$; $0.9 - 2/5 = 0.9 - 0.4 = 0.5 \Rightarrow$ first
- 54. $1 - 0.15 = 0.85 = 17/20$; $17/20 - 2/3 = (51 - 40)/60 = 11/60$

Error analysis accepts concise wording. #49 fraction form optional. #54 any equivalent to $11/60$ accepted.