Add/Sub Decimals

Example A:
7.27 + 2.9 =

Solution:
7.27 + 2.9 = 10.17

$$\begin{array}{r} 7.27 \\ +\ 2.90 \\ \hline 10.17 \end{array}$$

1. 7.9 + 7.52 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

2. 4.8 + 6.4 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

3. 11.6 + 19.5 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

4. 8.7 + 2.6 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

5. 6.9 + 3.1 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

6. 3.5 + 18.8 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

7. 8.93 + 8.1 =

$$\begin{array}{r} \cdot \\ +\ \cdot \\ \hline \cdot \end{array}$$

8. 9.3 + 1.5 =

$$\begin{array}{r} \\ + \\ \hline \\ \end{array}$$

9. 3.22 + 2.69 =

$$\begin{array}{r} \\ + \\ \hline \\ \end{array}$$

Example B:
3.7 - 2.05 =

Solution:
3.7 - 2.05 = 1.65

$$\begin{array}{r} 3.70 \\ -\ 2.05 \\ \hline 1.65 \end{array}$$

10. 5.4 - 3.5 =

$$\begin{array}{r} \\ - \\ \hline \\ \end{array}$$

11. 7.5 - 3.8 =

$$\begin{array}{r} \\ - \\ \hline \\ \end{array}$$

12. 5.3 - .2 =

$$\begin{array}{r} \\ - \\ \hline \\ \end{array}$$

13. 9.6 - 5.7 =

$$\begin{array}{r} \\ - \\ \hline \\ \end{array}$$

14. 8.8 - 3.3 =

$$\begin{array}{r} \\ - \\ \hline \\ \end{array}$$

15. 6.5 - 3.8 =

$$\begin{array}{r} \\ - \\ \hline \\ \end{array}$$

16. 9.7 - 6.4 =

17. 8.8 - 5.5 =

18. 6.43 - .7 =

19. 8.6 - 7.91 =

20. 6.5 - 1.912 =

Common Denominator

Equivalent fractions are fractions that have the same value. Equivalent fractions represent the same portion of an object. If we slice a pie into two equal pieces, one of the pieces is a half. Instead, if this pie is cut into 4 equal pieces, then two of these pieces is $\frac{2}{4}$ is equal to the size of a half-pie, so $\frac{2}{4} = \frac{1}{2}$.

You can discover more equivalent fractions by multiplying $\frac{2}{2}$, $\frac{3}{3}$, and $\frac{4}{4}$, etc. $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12}$, ... are called equivalent fractions.

Example C:

Find the values for a and b: $\frac{1}{3} = \frac{a}{6} = \frac{4}{b}$

a =

b =

Solution:

$\frac{1}{3} = \frac{a}{6} = \frac{4}{b}$

3×2 = 6, so 1×2 = $\underline{2 = a}$

1×4 = 4, so 3×4 = $\underline{12 = b}$

Example D:

Find the values for a and b: $\frac{3}{4} = \frac{a}{8} = \frac{18}{b}$

a =

b =

Solution:

$\frac{3}{4} = \frac{a}{8} = \frac{18}{b}$

4×2 = 8, so 3×2 = $\underline{6 = a}$

3×6 = 18, so 4×6 = $\underline{24 = b}$

Question set [**21 - 25**]

Find the values of ***a*** and ***b*** in each of the following questions.

21. $\frac{2}{7} = \frac{a}{21} = \frac{8}{b}$

a =

b =

22. $\frac{a}{21} = \frac{25}{b} = \frac{5}{7}$

a =

b =

23. $\frac{a}{21} = \frac{6}{7} = \frac{24}{b}$

a =

b =

24. $\frac{5}{8} = \frac{15}{a} = \frac{b}{40}$

a =

b =

25. $\frac{a}{81} = \frac{2}{9} = \frac{b}{36}$

a =

b =

Example E:

Compare two fractions using common denominator: $\frac{2}{3}, \frac{3}{4}$.

$\frac{2}{3} = \frac{\square}{\square}$ ◯ $\frac{3}{4} = \frac{\square}{\square}$

Solution:

$\frac{2}{3} = \frac{8}{12}$ $<$ $\frac{3}{4} = \frac{9}{12}$

Example F:

Compare two fractions using common denominator: $\frac{1}{2}, \frac{2}{5}$.

$\frac{1}{2} = \frac{\square}{\square}$ ◯ $\frac{2}{5} = \frac{\square}{\square}$

Solution:

$\frac{1}{2} = \frac{5}{10}$ $>$ $\frac{2}{5} = \frac{4}{10}$

Must find (the least) common denominator before comparison.

26. $\frac{3}{5} = \frac{\quad}{20}$ ◯ $\frac{3}{4} = \frac{\quad}{20}$

27. $\frac{4}{6} = \frac{\quad}{24}$ ◯ $\frac{5}{8} = \frac{\quad}{24}$

28. $\frac{5}{6}$ ○ $\frac{2}{3} = \frac{\quad}{6}$

29. $\frac{5}{9}$ ○ $\frac{2}{3} = \frac{\quad}{9}$

30. $\frac{6}{9}$ ○ $\frac{1}{3} = \frac{\quad}{9}$

31. $\frac{5}{8}$ ○ $\frac{2}{4} = \frac{\quad}{8}$

32. $\frac{5}{12}$ ○ $\frac{3}{4}$

33. $\frac{7}{24}$ ○ $\frac{1}{6} = \frac{\quad}{24}$

34. $\frac{7}{36}$ ○ $\frac{1}{6} = \frac{\quad}{36}$

35. $\frac{\quad}{12} = \frac{2}{3}$ ○ $\frac{5}{12}$

36. $\frac{\quad}{24} = \frac{3}{8}$ ○ $\frac{1}{6} = \frac{\quad}{24}$

37. $\frac{7}{12}$ ○ $\frac{3}{4} = \frac{\quad}{12}$

38. $\frac{7}{18}$ ○ $\frac{5}{6} = \frac{\quad}{18}$

39. $\frac{11}{16}$ ○ $\frac{3}{4} = \frac{\quad}{16}$

40. $\frac{\quad}{12} = \frac{3}{4}$ ○ $\frac{5}{12}$

Math Instinct

41. Kim is 12 years now. How many years ago did she go to kindergarten when she was 5 years old?

42. Mark reads at an average rate of 30 pages per hour, how many pages can he finish in 3 hours?

43. A puppy eats 2 pounds of food in 7 days. How many pounds of food are needed for 21 days?

44. Your class goes on a trip to see a circus show. The cost of the bus is $600 and the matinee price is $5 for each student. If the total cost of the trip is $800, how many students join the trip?

45. A cow and its calf weigh together 400 kg (kilograms). How much does the cow weigh if it weighs 300 kg more than the calf?

46. The sum of three whole numbers is 28. The first number is twice smaller than the second number. The second is twice the third number. Find these numbers.

47. If a piece of gum is three cents, how many pieces can Jane buy with 43 cents?

48. If Internet access costs $35 a month, how much does it cost for half year?

49. A newspaper costs thirty cents each. Amy buys a copy every day. How much does Amy spend on newspapers in one week?

50. If 40 oranges cost $8.00, how much does one orange cost?

51. 75 paper plates were placed on the table in 15 rows. How many paper plates are there in each row?

52. For a school day parade, 392 students are arranged in 7 rows. How many students are there in each row?

53. Bill borrowed $86 from Jill. Bill paid fifty-nine dollars back. How much does Bill still owe?

54. Five friends share 15 pieces of pumpkin pie equally. How many pieces does each friend get?

55. A hotel has 9 floors. Each floor has two sections. Each section has 20 rooms each. What is the total number of rooms in the hotel?

56. Jane had five dollars. A pear cost 85¢, and an apple cost $0.90. How much change would she get if she bought two pears and three apples?

57. 2 days and 14 hours = _____ hours

58. It is 9:30 P.M. now.
    (a) What time was it one hour ago?

    (b) What time was it 12 hours ago?

59. Diane's soccer practice starts at 1:15 P.M. If it takes her 90 minutes to get there, what time does Diane need to leave home?

60. I imagined a number. It is larger than 10 and smaller than 20. If I switch the order of digits, then the new number is larger than 60 and smaller than 70. What number did I imagine?

Answer Key

1. 15.42
2. 11.2
3. 31.1
4. 11.3
5. 10
6. 22.3
7. 17.03
8. 10.8
9. 5.91
10. 1.9
11. 3.7
12. 5.1
13. 3.9
14. 5.5
15. 2.7
16. 3.3
17. 3.3
18. 5.73
19. 0.69
20. 4.588
21. 6, 28
22. 15, 35
23. 18, 28
24. 24, 25
25. 18, 8
26. $\frac{3}{5} = \frac{12}{20} < \frac{3}{4} = \frac{15}{20}$
27. $\frac{4}{6} = \frac{16}{24} < \frac{5}{8} = \frac{15}{24}$
28. $\frac{5}{6} > \frac{4}{6}$
29. $\frac{5}{9} < \frac{2}{3}$
30. $\frac{6}{9} > \frac{1}{3}$
31. $\frac{5}{8} > \frac{2}{4}$
32. $\frac{5}{12} < \frac{3}{4}$
33. $\frac{7}{18} > \frac{1}{6}$
34. $\frac{3}{16} < \frac{1}{6}$
35. $\frac{2}{3} > \frac{5}{12}$
36. >
37. <
38. <
39. >
40. >
41. 12 - 5 = 7
42. 30×3 = 90
43. 21÷7 = 3 (wks)
    3×2 = 6 pounds
44. 800 - 600 = 200
    200÷5 = 40
45. 400 - 300 = 100
    100÷2 = 50 (calf)
    300 + 50 = 350 (cow)
46. 1 + 2 + 4 = 7
    28÷7 = 4
    1×4 = 4 (3rd)
    2×4 = 8 (2nd)
    4×4 = 16 (1st)
    4 + 8 + 16 = 28 (double-check)
47. 43÷3 = 14 R1
48. 35×6 = $210
49. 0.3×7 = $2.10
50. 8÷40 = 0.20 = 20¢
51. 75÷15 = 5 plates
52. 392÷7 = 56
53. 86 - 59 = $27
54. 15÷5 = 3 pieces
55. 9×2×20 = 360 rooms
56. 2×0.85 = 1.70
    3×0.90 = 2.70
    1.70 + 2.70 = 4.40
    5 - 4.40 = $0.60
57. 2×24 + 14 = 62
58. (a) 9:30 - 1:00 = 8:30 P.M.
    (b) 9:30 A.M.
59. 13:15 - 1:30= 11:45 A.M.
60. 16