

Add/Sub Decimals

Example A:

$$1.7 + 2.5 =$$

Solution:

$$1.5 + 2.5 = 4.2$$

$$\begin{array}{r} 1.7 \\ + 2.5 \\ \hline 4.2 \end{array}$$

8. $5.3 + 9.4 =$

9. $5.7 + 5.3 =$

10. $7.5 + 9.2 =$

1. $8.5 + 2.4 =$

11. $4.8 - 3.7 =$

2. $7.1 + 3.1 =$

12. $2.1 - .8 =$

3. $7.3 + 7.6 =$

13. $6.9 - 2.7 =$

4. $3.4 + 4.2 =$

14. $8.4 - 3.2 =$

5. $8.5 + 8.5 =$

15. $6.7 - 4.9 =$

6. $4.5 + 1.7 =$

16. $7.9 - 4.4 =$

7. $5.5 + 10.5 =$

17. $8.5 - 4.8 =$

$$(b) \frac{[a]}{8} = \begin{array}{ccc} \times 2 & & \times 6 \\ \leftarrow & \frac{3}{4} & \rightarrow \\ \times 2 & & \times 6 \end{array} = \frac{18}{[b]}$$

18. $5.6 - 1.7 =$

$4 \times 2 = 8$, so $3 \times 2 = \underline{6 = a}$

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

19. $2.2 - 1.3 =$

Question set [21 - 38]

Solve the following fraction puzzles.

21. $\frac{1}{2} = \frac{3}{[a]} = \frac{[b]}{14}$

$a =$

$b =$

20. $3.2 - 1.3 =$

Equivalent Fractions

Example A:

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

(a) $\frac{[a]}{6} = \frac{1}{3} = \frac{4}{[b]}$

$a =$

$b =$

(b) $\frac{[a]}{8} = \frac{3}{4} = \frac{18}{[b]}$

$a =$

$b =$

22. $\frac{1}{2} = \frac{3}{[a]} = \frac{[b]}{14}$

$a =$

$b =$

23. $\frac{3}{4} = \frac{[a]}{12} = \frac{[b]}{20}$

$a =$

$b =$

Solution:

$$(a) \frac{[a]}{6} = \begin{array}{ccc} \times 2 & & \times 4 \\ \leftarrow & \frac{1}{3} & \rightarrow \\ \times 2 & & \times 4 \end{array} = \frac{4}{[b]}$$

$3 \times 2 = 6$, so $1 \times 2 = \underline{2 = a}$

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

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24. $\frac{1}{3} = \frac{3}{[a]} = \frac{[b]}{15}$

$a =$

$b =$

29. $\frac{a}{5} = \frac{6}{10} = \frac{9}{b}$

$a =$

$b =$

25. $\frac{2}{5} = \frac{4}{[a]} = \frac{[b]}{25}$

$a =$

$b =$

30. $\frac{4}{5} = \frac{a}{10} = \frac{b}{15}$

$a =$

$b =$

26. $\frac{2}{7} = \frac{4}{a} = \frac{b}{35}$

$a =$

$b =$

31. $\frac{1}{a} = \frac{b}{12} = \frac{5}{20}$

$a =$

$b =$

27. $\frac{3}{3} = \frac{4}{a} = \frac{b}{10}$

$a =$

$b =$

32. $\frac{2}{7} = \frac{4}{a} = \frac{b}{35}$

$a =$

$b =$

28. $\frac{7}{3} = \frac{a}{6} = \frac{63}{b}$

$a =$

$b =$

33. $\frac{3}{7} = \frac{a}{14} = \frac{9}{b}$

$a =$

$b =$

37. $\frac{3}{7} = \frac{12}{a} = \frac{b}{35}$

$a =$

$b =$

34. $\frac{a}{15} = \frac{6}{30} = \frac{10}{b}$

$a =$

$b =$

38. $\frac{4}{5} = \frac{a}{15} = \frac{16}{b}$

$a =$

$b =$

35. $\frac{3}{5} = \frac{a}{20} = \frac{b}{25}$

$a =$

$b =$

39. Order the decimals from greatest to least.
0.12 0.3 0.04 0.89 1.01

40. Order the fractions and mixed numbers from least to greatest.

$\frac{21}{5}, \frac{11}{5}, 3\frac{1}{5}, 2\frac{3}{5}$

36. $\frac{1}{a} = \frac{b}{16} = \frac{5}{40}$

$a =$

$b =$

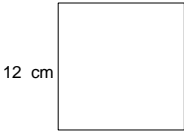
Math Instinct

41. Cheryl has these pets: 14 cats, 12 parrots, 13 dogs, and 14 ducks. How many pet birds does Cheryl have altogether?

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42. Each day, Mother gave 7 lollipops to Sam and Sylvia. Sam got 2.
(a) From Monday to Friday, how many would Sylvia get?

(b) How many days did Mother give out a total of 42 lollipops?

(c) If Sam received 20 lollipops, how many would Sylvia get in the same number of days?
43. Lilly will turn 30 years old in 17 years. How old was she 3 years ago?
44. Jake thought to himself. In 2 years, he will get a job. In 3 more years, he will buy a car; 5 years later, he will travel around the world at the age of 22. What is his current age?
45. Lily earned 82, 78, 83 and 85 in her math tests. What is the average of her test scores?
46. Write 100 by inserting the following with signs such as +, -, ×, or ÷.
 $1\ 1\ 1\ 1\ 1 = 100$
47. Mark reads at an average rate of 30 pages per hour. How many hours does he need to read 150 pages?
48. Write all the numbers for which this is true:
 $348 + \underline{\hspace{2cm}} < 355$
49. Two integers are consecutive when their difference is one. For example, 3 and 4 are consecutive, but 12 and 14 are not. Two consecutive numbers have a sum of 91. What is the larger number?
50. Find the perimeter of a square with each side 12 cm.
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51. Brad bought fifteen pens and gave 6 of them to Michael. If Brad used up the ink in 5 of the pens, how many pens with ink does Brad have left?
52. Dad prepared a prize for each winner. He planned a total of 48 prizes. Each game would have 3 winners. How many games can be played at the party?

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53. A coffee shop sold 15 cups of coffee from 5 A.M. to 6 A.M., 19 cups of coffee from 6 A.M. to 7 A.M., 38 cups of coffee from 7 P.M. to 8 P.M., and 16 cups of coffee from 8 P.M. to 9 P.M. How many cups of coffee were sold in the morning?
54. Each classroom has 24 students. If there are 5 classrooms, how many students are there in total?
55. Brad has to drive 8 miles to work every day and another 7 miles home using a different route. How many miles does Brad drive in 8 days?
56. The train ticket to Golden Sands costs 4 times that to Mushroom Garden. If the ticket to Golden Sands costs \$52, how many dollars is the ticket to Mushroom Garden?
57. A merchant gave 900 gold coins to his 6 sons equally. How many coins did each son get?
58. Darren invites 14 friends to his birthday party. He distributes 70 balloons equally among them. How many balloons did each friend get?
59. Mark has a collection of 165 books. He donated 16 books last year and 27 books this year. How many books does he have left?
60. Peter has 10 marbles in his right pocket and 16 marbles in his left pocket. To make both pockets equal in number of marbles, how many marbles does he need to move from the left pocket to the right?

Answer Key

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|-----------|--|--|
| 1. 10.9 | 25. 10, 10 | 44. $22 - 5 - 3 - 2 = 12$ |
| 2. 10.2 | 26. 14, 10 | 45. $82 + 78 + 83 + 85 = 328$
$328 \div 4 = 82$ |
| 3. 14.9 | 27. 4, 10 | 46. $111 - 11$ |
| 4. 7.6 | 28. 14, 27 | 47. $150 \div 30 = 5$ hrs |
| 5. 17 | 29. 3, 15 | 48. 1, 2, 3, 4, 5, 6 |
| 6. 6.2 | 30. 8, 12 | 49. $91 - 1 = 90$
$90 \div 2 = 45$
$45 + 1 = 46$ |
| 7. 16 | 31. 4, 3 | 50. $4 \times 12 = 48$ cm |
| 8. 14.7 | 32. 14, 10 | 51. $15 - 6 - 5 = 4$ |
| 9. 11 | 33. 6, 21 | 52. $48 \div 3 = 16$ |
| 10. 16.7 | 34. 2, 75 | 53. $15 + 19 = 34$ cups |
| 11. 1.1 | 35. 12, 15 | 54. $5 \times 24 = 120$ |
| 12. 1.3 | 36. 8, 2 | 55. $8 + 7 = 15$
$8 \times 15 = 120$ mi |
| 13. 4.2 | 37. 28, 15 | 56. $52 \div 4 = \$13$ |
| 14. 5.2 | 38. 12, 20 | 57. $900 \div 6 = 150$ coins |
| 15. 1.8 | 39. 1.01, 0.89, 0.3, 0.12, 0.04 | 58. $70 \div 14 = 5$ balloons |
| 16. 3.5 | 40. $\frac{11}{5} = 2\frac{1}{5}, 2\frac{3}{5}, 3\frac{1}{5}, \frac{21}{5} = 4\frac{1}{5}$ | 59. $165 - 16 - 27 = 122$ books |
| 17. 3.7 | 41. $14 + 12 = 26$ birds (Duck is a kind of birds.) | 60. $16 - 10 = 6$
$6 \div 2 = 3$ marbles |
| 18. 3.9 | 42. (a) $7 - 2 = 5, 5 \times 5 = 25$
lollipops
(b) $42 \div 7 = 6$ days
(c) $20 \div 2 = 10, 10 \times 5 = 50$
lollipops | |
| 19. 0.9 | 43. $30 - 17 - 3 = 10$ | |
| 20. 1.8 | | |
| 21. 6, 7 | | |
| 22. 6, 7 | | |
| 23. 9, 15 | | |
| 24. 9, 5 | | |