

Decimal Strategies

Pipe Music with Decimals

Book 7 Pages 22-24

We are practicing adding and subtracting decimals

AC

EA

AA

AM

AP

Exercise 1

Joe adds decimals by using **place value**:

Example A: $2.7 + 3.09$

Units: $2 + 3 = 5$ units

Tenths: $7 + 0 = 7$ tenths

Hundredths: $0 + 9 = 9$ hundredths

Answer: 5.79

Example B: $2.83 + 1.34$

Units = 3 units

Tenths: $8 + 3 = 11$ tenths = 1 unit + 1 tenth

Hundredths: $3 + 4 = 7$ hundredths

Answer: 4.17

This is a tricky question using this strategy because a column is filled (11 tenths is too big for one column). There are other strategies you may find EASIER for this type of sum.

Use Joe's method to solve the following sums. If the sum fills a column you can use another method for those questions. Show your working just like Joe.

1) $0.4 + 0.13$

(2) $1.6 + 2.3$

(3) $0.72 + 0.17$

4) $2.9 + 0.4$

(5) $3.8 + 4.17$

(6) $5.3 + 9.59$

7) $8.7 + 2.23$

(8) $5.12 + 8.67$

(9) $3.04 + 5.7$

10) $2.51 + 8.2$

(11) $2.5 + 2.5$

(12) $1.14 + 1.14$

13) $3.6 + 2.4$

(14) $2.64 + 1.4$

(15) $1.9 + 1.3$

16) $1.2 + 4.9$

(17) $0.8 + 0.2$

(18) $4.67 + 3.31$

19) $0.4 + 0.51$

(20) $1.17 + 3.5$

Exercise 2

1) $\square + 4.6 = 8.9$

(2) $7.2 + \square = 11.6$

(3) $3.5 + \square = 4.8$

4) $8.1 + \square = 19.9$

(5) $6.7 + \square = 8.9$

(6) $\square + 5.1 = 7.4$

7) $\square + 4.25 = 6.45$

(8) $9.84 + \square = 10.98$

(9) $\square + 2.71 = 5.94$

10) $3.64 + \square = 6.78$

(11) $\square + 4.15 = 9.36$

(12) $\square + 0.11 = 2.76$

Exercise 3

- 1) Samantha has \$2.45. Natalie then gives her \$1.30. How much money does Samantha now have?

- 2) Alan fills a jug with 1.85 Litres of lemonade. Sally then pours a 0.35 L glass of the lemonade. How much lemonade is left?
- 3) Donald travels 0.2 km by foot and then catches a bus for 3.63 km. How far has he travelled?
- 4) Bruce has \$30.50 left on his mobile phone account. He then calls Erik and the call costs \$1.40. How much money does Bruce have left on his mobile phone account?
- 5) Sarah, Heather and John flat together. They have budgeted \$180 for this month's electricity bill. The actual bill costs \$173.65. How much money is left after paying the bill?
- 6) Cameron buys a TV for \$210.00 and a DVD player for \$185.95. How much has he spent?
- 7) Katie wants to go to the local swimming pool. It will cost her \$3.25 to use the pool and \$0.80 to hire a locker for her clothes. How much will it cost in total?
- 8) A year ago Paul measured his height as 1.45m. He is now 1.68m. How much taller is he this year (in metres)?

Exercise 4

- 1) Carl is training for a triathlon. On Tuesday he ran 11.2km, cycled 50.4km on Thursday, and swam 4.2km on Saturday. How far did he travel altogether?
- 2) Malcolm paid \$5000 for a second hand car. He then pays \$245.30 for a set of tyres and \$512.00 for a car alarm. How much has he paid altogether?
- 3) Tim sits down to pay all his bills by internet banking. He pays \$113.24, \$21.12, and \$260.00. How much did the bills cost in total?
- 4) Tara works in a fabric store. A roll of satin has 20.7m left on it. During the day Tara sells 6.1m, 1.4m and 1.2m of the satin. How much satin is left?
- 5) Nicholas is sent to the shops with \$8 to buy 3 things for his family. He needs to buy a jar of jam at \$2.30, a box of cereal at \$3.15 and a loaf of bread at \$2.25. How much change will he have?
- 6) A cake recipe says: 'Add 0.45 kg sugar to 1.1 kg of flour and 0.3 kg of raisins'. How much would you expect this mixture to weigh?
- 7) A runner breaks a race record by 0.16 seconds. The old record was 12.37 seconds. What is the new record?

Pipe Music with Decimals Answers

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Tenths: $7 + 0 = 7$ tenths

Hundredths: $0 + 9 = 9$ hundredths

Answer: **5.79**

Example B: $2.83 + 1.34$

Units = 3 units

Tenths: $8 + 3 = 11$ tenths = 1 unit + 1 tenth

Hundredths: $3 + 4 = 7$ hundredths

Answer: **4.17**

This is a tricky question using this strategy because a column is filled (11 tenths is too big for one column). There are other strategies you may find **EASIER** for this type of sum.

Use Joe's method to solve the following sums. If the sum fills a column you can use another method for those questions. Show your working just like Joe.

1) $0.4 + 0.13 = \mathbf{0.53}$

(2) $1.6 + 2.3 = \mathbf{3.9}$

(3) $0.72 + 0.17 = \mathbf{0.89}$

4) $2.9 + 0.4 = \mathbf{3.3}$

(5) $3.8 + 4.17 = \mathbf{7.97}$

(6) $5.3 + 9.59 = \mathbf{14.89}$

7) $8.7 + 2.23 = \mathbf{10.93}$

(8) $5.12 + 8.67 = \mathbf{13.79}$

(9) $3.04 + 5.7 = \mathbf{8.74}$

10) $2.51 + 8.2 = \mathbf{10.71}$

(11) $2.5 + 2.5 = \mathbf{5}$

(12) $1.14 + 1.14 = \mathbf{2.28}$

13) $3.6 + 2.4 = \mathbf{6}$

(14) $2.64 + 1.4 = \mathbf{4.04}$

(15) $1.9 + 1.3 = \mathbf{3.2}$

16) $1.2 + 4.6 = \mathbf{6.8}$

(17) $0.8 + 0.2 = \mathbf{1}$

(18) $4.67 + 3.31 = \mathbf{7.98}$

19) $0.4 + 0.51 = \mathbf{0.91}$

(20) $1.13 + 3.5 = \mathbf{4.63}$

The answers to Q11, 13, 14 and 15 have sums that fill a column.

Exercise 2

1) $\boxed{4.3} + 4.6 = 8.9$

(2) $7.2 + \boxed{4.4} = 11.6$

(3) $3.5 + \boxed{1.3} = 4.8$

4) $8.1 + \boxed{11.8} = 19.9$

(5) $6.7 + \boxed{2.1} = 8.9$

(6) $\boxed{2.3} + 5.1 = 7.4$

7) $\boxed{2.2} + 4.25 = 6.45$

(8) $9.84 + \boxed{1.14} = 10.98$

(9) $\boxed{3.23} + 2.71 = 5.94$

10) $3.64 + \boxed{3.14} = 6.78$

(11) $\boxed{5.21} + 4.15 = 9.36$

(12) $\boxed{2.65} + 0.11 = 2.76$

Exercise 3

1. \$3.75
2. 1.6 litres
3. 3.83 km
4. \$29.10
5. \$6.35
6. \$595.65
7. \$3.75
8. 0.23m

Exercise 4:

1. 65.8km
2. \$5757.30
3. \$394.36
4. 12m
5. \$0.30
6. 1.85kg
7. 12.21 seconds