

Decimal Fractions (tenths)

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Jumping the number line

We are learning to jump through a whole number on a number line to solve problems like $1.7 + \square = 9.1$.

Exercise 1

Freda worked out how to find $5 + \square = 8.2$ by saying to herself $5 + 3$ gives 8, $8 + 0.2$ is 8.2. Use Freda's method to work these out.

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|--------------------------|----------------------------|----------------------------|
| 1) $6 + \square = 8.5$ | (2) $1 + \square = 9.3$ | (3) $3 + \square = 7.4$ |
| 4) $2 + \square = 5.7$ | (5) $6 + \square = 8.5$ | (6) $3 + \square = 8.3$ |
| 7) $5 + \square = 9.6$ | (8) $8 + \square = 10.2$ | (9) $4 + \square = 7.8$ |
| 10) $9 + \square = 10.8$ | (11) $2 + \square = 7.6$ | (12) $5 + \square = 9.1$ |
| 13) $4 + \square = 8.4$ | (14) $7 + \square = 9.6$ | (15) $9 + \square = 12.7$ |
| 16) $8 + \square = 12.5$ | (17) $10 + \square = 15.3$ | (18) $12 + \square = 14.8$ |

Exercise 2

Willow worked out $4.7 + \square = 8.2$ like this:

$4.7 + 0.3 = 5$, and she wrote down 0.3

$5 + 3 = 8$, and she wrote down 3

$8 + 0.2 = 8.2$, and she wrote down 0.2.

Willow's answer was 3.5. Use Willow's answer to work these out. Do writing like Willow's in your maths book if that helps you.

Writing in Willow's book.

$$0.3 + 3 + 0.2 = 3.5$$

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|----------------------------|------------------------------|------------------------------|
| 1) $6.9 + \square = 8.5$ | (2) $4.8 + \square = 9.3$ | (3) $5.7 + \square = 7.4$ |
| 4) $2.9 + \square = 5.2$ | (5) $6.8 + \square = 8.5$ | (6) $2.9 + \square = 8.3$ |
| 7) $5.7 + \square = 9.1$ | (8) $8.9 + \square = 10.2$ | (9) $4.6 + \square = 7.2$ |
| 10) $9.9 + \square = 15.4$ | (11) $2.8 + \square = 8.4$ | (12) $5.9 + \square = 9.1$ |
| 13) $3.8 + \square = 8.4$ | (14) $5.9 + \square = 10.2$ | (15) $9.8 + \square = 12.1$ |
| 16) $8.7 + \square = 12.3$ | (17) $10.8 + \square = 15.3$ | (18) $12.9 + \square = 15.3$ |

Exercise 3

Hazel worked out $3.8 + \square = 9.3$ using only two steps:

$3.8 + 0.2 = 4$, and she wrote down 0.2

$4 + 5.3 = 9.3$, and she wrote down 5.3.

Writing in Hazel's book.

$$0.2 + 5.3 = 5.5$$

Hazel's answer was 5.5. Use Hazel's answer to work these out. Do writing like Hazel's in your maths book if that helps you.

1) $2.9 + \square = 8.3$

(2) $6.8 + \square = 10.3$

(3) $3.7 + \square = 8.2$

4) $1.9 + \square = 10.2$

(5) $4.8 + \square = 9.1$

(6) $12.9 + \square = 18.5$

7) $15.8 + \square = 19.1$

(8) $6.9 + \square = 9.2$

(9) $14.6 + \square = 19.2$

10) $9.9 + \square = 25.2$

(11) $2.7 + \square = 18.4$

(12) $5.8 + \square = 18.1$

13) $3.6 + \square = 28.4$

(14) $15.9 + \square = 28.2$

(15) $9.8 + \square = 12.1$

16) $4.7 + \square = 25.3$

(17) $10.8 + \square = 37.3$

(18) $22.9 + \square = 55.3$

Exercise 4

Here are some more challenging problems. Have a go at them.

1) $19.8 + \square = 224.5$

(2) $29.9 + \square = 343.3$

(3) $32.6 + \square = 87.1$

4) $22.9 + \square = 54.2$

(5) $35.8 + \square = 69.4$

(6) $49.8 + \square = 150.4$

7) $59.6 + \square = 192.1$

(8) $99.9 + \square = 259.2$

(9) $50.5 + \square = 89.2$

10) $99.3 + \square = 853.2$

(11) $99.7 + \square = 187.4$

(12) $53.8 + \square = 78.1$

Jumping the number line – decimal fractions (tenths)

Teacher's Notes

Number Framework domain: decimal fractions add/sub

Stage: 6 Advanced additive

Curriculum Reference: level 3

Prior knowledge. Students should be able to:

- Use the strategy jumping the number line book 5 page 33
- Combinations of tenths that add to one
- Basic facts to 20

During these activities, students will meet:

Using jumping the number line strategy to add decimal fractions (tenths)

Background

These exercises have been set up in the following way.

Exercise 1: adding on from a whole number

Exercise 2: jumping up to a whole number and then adding on using three step method

Exercise 3: using two steps only

Exercise 4: harder problems

Practice exercises with answers **PDF** **or Word**

Related activities

Jumping the number line – decimal fractions (tenths)

Answers

Exercise 1

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|-----|-----|------|-----|------|-----|------|-----|
| 1) | 2.5 | (2) | 8.3 | (3) | 4.4 | (4) | 3.7 |
| 5) | 2.5 | (6) | 5.3 | (7) | 4.6 | (8) | 2.2 |
| 9) | 3.8 | (10) | 1.8 | (11) | 5.6 | (12) | 4.1 |
| 13) | 4.4 | (14) | 2.6 | (15) | 3.7 | (16) | 4.5 |
| 17) | 5.3 | (18) | 2.8 | | | | |

Exercise 2

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|-----|-----------------------|------|-----------------------|
| 1) | $0.1 + 1 + 0.5 = 1.6$ | (2) | $0.2 + 4 + 0.3 = 4.5$ |
| 3) | $0.3 + 1 + 0.4 = 1.7$ | (4) | $0.1 + 2 + 0.2 = 2.3$ |
| 5) | $0.2 + 1 + 0.5 = 1.7$ | (6) | $0.1 + 5 + 0.3 = 5.4$ |
| 7) | $0.3 + 3 + 0.1 = 3.4$ | (8) | $0.1 + 1 + 0.2 = 1.3$ |
| 9) | $0.4 + 2 + 0.2 = 2.6$ | (10) | $0.1 + 5 + 0.4 = 5.5$ |
| 11) | $0.2 + 5 + 0.4 = 5.6$ | (12) | $0.1 + 3 + 0.1 = 3.2$ |
| 13) | $0.2 + 4 + 0.4 = 4.6$ | (14) | $0.1 + 4 + 0.2 = 4.3$ |
| 15) | $0.2 + 2 + 0.1 = 2.3$ | (16) | $0.3 + 3 + 0.3 = 3.6$ |
| 17) | $0.2 + 4 + 0.3 = 4.5$ | (18) | $0.1 + 2 + 0.3 = 2.4$ |

Exercise 3

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|-----|---------------------|------|---------------------|
| 1) | $0.1 + 5.3 = 5.4$ | (2) | $0.2 + 3.3 = 3.5$ |
| 3) | $0.3 + 4.2 = 4.5$ | (4) | $0.1 + 8.2 = 8.3$ |
| 5) | $0.2 + 4.1 = 4.3$ | (6) | $0.1 + 5.5 = 5.6$ |
| 7) | $0.2 + 3.1 = 3.3$ | (8) | $0.1 + 2.2 = 2.3$ |
| 9) | $0.4 + 4.2 = 4.6$ | (10) | $0.1 + 15.2 = 15.3$ |
| 11) | $0.3 + 15.4 = 15.7$ | (12) | $0.2 + 12.1 = 12.3$ |
| 13) | $0.4 + 24.4 = 24.8$ | (14) | $0.1 + 12.2 = 12.3$ |
| 15) | $0.2 + 2.1 = 2.3$ | (16) | $0.3 + 20.3 = 20.6$ |
| 17) | $0.2 + 26.3 = 26.5$ | (18) | $0.1 + 32.3 = 32.4$ |

Exercise 4

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|-----|-----------------------|------|-----------------------|
| 1) | $0.2 + 204.5 = 204.7$ | (2) | $0.1 + 313.3 = 313.4$ |
| 3) | $0.4 + 54.1 = 54.5$ | (4) | $0.1 + 31.2 = 31.3$ |
| 5) | $0.2 + 33.4 = 33.6$ | (6) | $0.2 + 100.4 = 100.6$ |
| 7) | $0.4 + 132.1 = 132.5$ | (8) | $0.1 + 159.2 = 159.3$ |
| 9) | $0.5 + 38.2 = 38.7$ | (10) | $0.7 + 753.2 = 753.9$ |
| 11) | $0.3 + 87.4 = 87.7$ | (12) | $0.2 + 24.1 = 24.3$ |