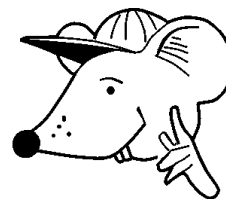


MATHEMATICS



N.S. Yr. 6 P.47

**Use known number facts to add
or subtract pairs of numbers mentally.**

Equipment

Paper, pencil, ruler

Number cards

Stop clock

MathSphere

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Concepts

In year 6 children are expected to continue to calculate mentally using a variety of methods, concentrating more at this age on decimal fractions. They are also expected to explain their methods, both orally and in writing.

The main types of problem encountered when adding and subtracting decimal fractions are to do with place value.

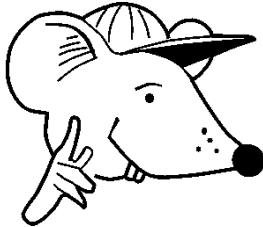
Example:

0.03 + 0.4 a common error would be to write **0.07** or **0.7**, rather than the correct answer of **0.43**.

In a similar way:

0.5 - 0.43 some children will say that "you can't do it", believing that the **0.43** is a larger number than the **0.5**.

All methods used must be explained by the child, in words and writing.

Mental arithmetic - adding decimal fractions

Try adding these as quickly as you can.
Watch out that you add tenths to tenths,
and hundredths to hundredths!

1. $0.64 + 0.2 =$

2. $0.37 + 0.3 =$

3. $0.17 + 0.8 =$

4. $0.4 + 0.12 =$

5. $0.7 + 0.09 =$

6. $0.6 + 0.36 =$

7. $0.5 + 0.36 =$

8. $0.8 + 0.18 =$

9. $0.3 + 0.39 =$

10. $0.72 + 0.2 =$

11. $0.48 + 0.5 =$

12. $0.66 + 0.1 =$

Work out mentally the answers to the next set of sums. Next to each one write down the method you used to do it.

Eg $0.4 + 0.23 = 0.63$

Explain: I just added the four tenths to the two tenths and three hundredths, making 0.63

13. $0.3 + 0.47 =$

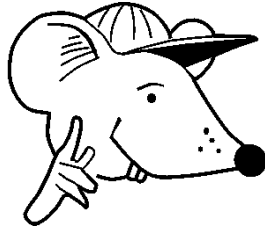
Explain:

14. $0.23 + 0.02 =$

Explain:

15. $0.4 + 0.16 =$

Explain:

Mental arithmetic - adding decimal fractions

What is everybody in the world doing
at this very second?

Growing older!

1. $0.57 + 0.3 =$

2. $0.58 + 0.4 =$

3. $0.28 + 0.6 =$

4. $0.5 + 0.33 =$

5. $0.4 + 0.06 =$

6. $0.7 + 0.27 =$

7. $0.2 + 0.57 =$

8. $0.5 + 0.16 =$

9. $0.6 + 0.05 =$

10. $0.77 + 0.2 =$

11. $0.61 + 0.03 =$

12. $0.34 + 0.01 =$

Work out mentally the answers to the next set of sums. Next to each one write down the method you used to do it.

Eg $0.02 + 0.2 = 0.22$

Explain: I just added the two tenths to the tenths column, where there weren't any so the answer is 0.22

13. $0.5 + 0.32 =$

Explain:

14. $0.26 + 0.03 =$

Explain:

15. $0.6 + 0.12 =$

Explain:

Mental arithmetic - subtracting decimal fractions

Try these - but watch out that you subtract the correct numbers. Write the answer only.

1. $0.53 - 0.2 =$

2. $0.51 - 0.4 =$

3. $0.73 - 0.6 =$

4. $0.7 - 0.22 =$

5. $0.5 - 0.31 =$

6. $0.6 - 0.14 =$

7. $0.2 - 0.02 =$

8. $0.4 - 0.38 =$

9. $0.9 - 0.09 =$

10. $0.62 - 0.4 =$

11. $0.41 - 0.06 =$

12. $0.52 - 0.08 =$

Work out mentally the answers to the next set of sums. Next to each one write down the method you used to do it.

Eg $0.2 - 0.01 = 0.19$

Explain: 0.2 is the same as 0.20 .
Subtract 0.01 from 0.20 is 0.19

13. $0.7 - 0.28 =$

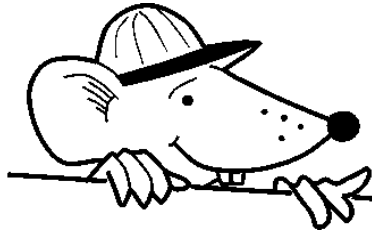
Explain:

14. $0.35 - 0.05 =$

Explain:

15. $0.7 - 0.63 =$

Explain:

Mental arithmetic - subtracting decimal fractions

What happened to the plant in the maths classroom?

It grew square roots!

1. $0.44 - 0.3 =$

2. $0.62 - 0.5 =$

3. $0.78 - 0.5 =$

4. $0.8 - 0.32 =$

5. $0.6 - 0.33 =$

6. $0.7 - 0.25 =$

7. $0.3 - 0.08 =$

8. $0.5 - 0.22 =$

9. $0.9 - 0.06 =$

10. $0.42 - 0.2 =$

11. $0.43 - 0.08 =$

12. $0.51 - 0.07 =$

Work out mentally the answers to the next set of sums. Next to each one write down the method you used to do it.

Eg $0.53 - 0.5 = 0.03$

Explain: subtract the tenths, $0.5 - 0.5$, leaves 0.03 as the answer.

13. $0.6 - 0.17 =$

Explain:

14. $0.98 - 0.09 =$

Explain:

15. $0.4 - 0.11 =$

Explain:

Subtraction of decimals - mental arithmetic

1. $0.6 - 0.34 =$

2. $0.7 - 0.13 =$

3. $0.2 - 0.01 =$

4. $0.9 - 0.58 =$

5. $- 0.3 = 0.47$

6. $- 0.2 = 0.61$

7. $0.87 -$ $= 0.4$

8. $0.88 -$ $= 0.58$

9. $0.22 -$ $= 0.1$

10. $0.37 -$ $= 0.3$

Work out the next five answers. Write down how you did them.

11. $0.45 -$ $= 0.4$

12. $0.68 -$ $= 0.4$

13. $- 0.2 = 0.32$

14. $- 0.6 = 0.16$

15. $0.44 -$ $= 0.04$

Explain:



Add on 5 hundredths to the answer 0.4 to make 0.45

Explain:

Explain:

Explain:

Explain:

Subtraction of decimals - mental arithmetic

1. $0.7 - 0.48 =$

2. $0.3 - 0.18 =$

3. $0.3 - 0.04 =$

4. $0.8 - 0.62 =$

5. $- 0.3 = 0.51$

6. $- 0.3 = 0.66$

7. $0.59 -$ $= 0.5$

8. $0.71 -$ $= 0.7$

9. $0.33 -$ $= 0.3$

10. $0.26 -$ $= 0.2$

Work out the next five answers. Write down how you did them.

11. $0.6 -$ $= 0.51$

12. $0.77 -$ $= 0.7$

13. $- 0.5 = 0.48$

14. $- 0.3 = 0.51$

15. $0.88 -$ $= 0.08$

Explain:



Add on 9 hundredths to the answer 0.51 to make 0.6

Explain:

Explain:

Explain:

Explain:

Addition and Subtraction of decimals

Without doing any working out on paper, write the answers to these sums:

1. $0.3 + 0.59 =$

2. $0.2 + 0.07 =$

3. $0.27 - 0.1 =$

4. $0.93 - 0.9 =$

5. $+ 0.7 = 0.91$

6. $+ 0.53 = 0.93$

7. $- 0.04 = 0.45$

8. $- 0.06 = 0.5$

9. $0.5 -$ $= 0.23$

10. $0.9 -$ $= 0.66$

11. $0.44 -$ $= 0.2$

12. $0.71 -$ $= 0.1$

Take your time with these- it's easy to make a mistake!



13. $0.4 + 0.26 =$

14. $0.8 + 0.18 =$

15. $0.5 - 0.25 =$

16. $0.6 - 0.32 =$

Addition and Subtraction of decimals

Without doing any working out on paper, write the answers to these sums:

1. $0.5 + 0.38 =$

2. $0.4 + 0.01 =$

3. $0.54 - 0.3 =$

4. $0.78 - 0.6 =$

5. $+ 0.4 = 0.68$

6. $+ 0.71 = 0.88$

7. $- 0.06 = 0.32$

8. $- 0.08 = 0.7$

9. $0.8 -$ $= 0.11$

10. $0.7 -$ $= 0.44$

11. $0.22 -$ $= 0.1$

12. $0.99 -$ $= 0.11$

Nearly finished ? Consider
yourself an expert decimal dude!
(Unlike me!)



13. $0.8 + 0.12 =$

14. $0.5 + 0.09 =$

15. $0.7 - 0.18 =$

16. $0.3 - 0.09 =$

Answers**Page 3**

1. 0.84 2. 0.67 3. 0.97 4. 0.52 5. 0.79 6. 0.96 7. 0.86 8. 0.98
 9. 0.69 10. 0.92 11. 0.98 12. 0.76 13. 0.77 14. 0.25 15. 0.56 with explanations

Page 4

1. 0.87 2. 0.98 3. 0.88 4. 0.83 5. 0.46 6. 0.97 7. 0.77 8. 0.66
 9. 0.65 10. 0.97 11. 0.64 12. 0.35 13. 0.82 14. 0.29 15. 0.72 with explanations

Page 5

1. 0.33 2. 0.11 3. 0.13 4. 0.48 5. 0.19 6. 0.46 7. 0.18 8. 0.02
 9. 0.81 10. 0.22 11. 0.35 12. 0.44 13. 0.42 14. 0.30 15. 0.07 with explanations.

Page 6

1. 0.14 2. 0.12 3. 0.28 4. 0.48 5. 0.27 6. 0.45 7. 0.22 8. 0.28
 9. 0.84 10. 0.22 11. 0.35 12. 0.44 13. 0.43 14. 0.89 15. 0.29 with explanations.

Page 7

1. 0.26 2. 0.57 3. 0.19 4. 0.32 5. 0.77 6. 0.81 7. 0.47 8. 0.30
 9. 0.12 10. 0.07 11. 0.05 12. 0.28 13. 0.52 14. 0.76 15. 0.40 with explanations.

Page 8

1. 0.22 2. 0.12 3. 0.26 4. 0.18 5. 0.81 6. 0.96 7. 0.09 8. 0.01
 9. 0.03 10. 0.06 11. 0.09 12. 0.07 13. 0.98 14. 0.81 15. 0.80 with explanations

Page 9

1. 0.89 2. 0.27 3. 0.17 4. 0.03 5. 0.21 6. 0.40 7. 0.49 8. 0.56
 9. 0.27 10. 0.24 11. 0.24 12. 0.61 13. 0.66 14. 0.98 15. 0.25 16. 0.28

Page 10

1. 0.88 2. 0.41 3. 0.24 4. 0.18 5. 0.28 6. 0.17 7. 0.38 8. 0.78
 9. 0.69 10. 0.26 11. 0.12 12. 0.88 13. 0.92 14. 0.59 15. 0.52 16. 0.21