

Mental Math These problems can be used to keep the facts alive in the memory and to develop mental math skills. Have the teacher say the problem slowly enough so that the student comprehends, and then walk him through increasingly difficult exercises. The purpose is to stretch but not discourage. You decide where that line is!

Example $2 + 3 + 1 = ?$ "Two plus three plus one equals what number?"

The student thinks, "2 + 3 = 5, and 5 + 1 = 6." At first you will need to go slowly enough for him or her to verbalize the intermediate step. As skills increase, the student should be able to just give the answer.

Use after *Alpha Lesson 9*

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|-------------------------|--------------------------|
| 1) $4 + 1 + 1 = ?$ (6) | 6) $1 + 3 + 0 = ?$ (4) |
| 2) $2 + 2 + 0 = ?$ (4) | 7) $6 + 2 + 1 = ?$ (9) |
| 3) $5 + 1 + 2 = ?$ (8) | 8) $5 + 2 + 2 = ?$ (9) |
| 4) $3 + 2 + 2 = ?$ (7) | 9) $7 + 2 + 8 = ?$ (17) |
| 5) $8 + 1 + 5 = ?$ (14) | 10) $9 + 0 + 1 = ?$ (10) |

Use after *Alpha Lesson 12*

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|-------------------------|-------------------------|
| 1) $4 + 4 + 1 = ?$ (9) | 6) $1 + 2 + 3 = ?$ (6) |
| 2) $2 + 3 + 5 = ?$ (10) | 7) $2 + 4 + 8 = ?$ (14) |
| 3) $1 + 6 + 2 = ?$ (9) | 8) $8 + 0 + 4 = ?$ (12) |
| 4) $6 + 2 + 7 = ?$ (15) | 9) $3 + 3 + 9 = ?$ (15) |
| 5) $0 + 9 + 9 = ?$ (18) | 10) $2 + 2 + 2 = ?$ (6) |

Use after *Alpha Lesson 15*

Don't try the longer problems unless the student is comfortable with the shorter ones.

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|-------------------------|------------------------------|
| 1) $3 + 4 + 3 = ?$ (10) | 6) $1 + 1 + 2 + 3 = ?$ (7) |
| 2) $6 + 1 + 7 = ?$ (14) | 7) $2 + 1 + 0 + 7 = ?$ (10) |
| 3) $1 + 8 + 8 = ?$ (17) | 8) $2 + 2 + 1 + 6 = ?$ (11) |
| 4) $2 + 3 + 4 = ?$ (9) | 9) $3 + 1 + 4 + 1 = ?$ (9) |
| 5) $9 + 0 + 3 = ?$ (12) | 10) $4 + 4 + 1 + 5 = ?$ (14) |

All of these review addition. You may shorten these if your student is not yet ready for the longer questions.

1) $1 + 2 + 3 + 4 = ?$ (10)

6) $5 + 4 + 0 + 7 = ?$ (16)

2) $2 + 2 + 1 + 2 = ?$ (7)

7) $2 + 2 + 2 + 2 = ?$ (8)

3) $3 + 1 + 4 + 1 = ?$ (9)

8) $3 + 4 + 1 + 5 = ?$ (13)

4) $8 + 0 + 1 + 3 = ?$ (12)

9) $2 + 3 + 2 + 3 = ?$ (10)

5) $5 + 1 + 1 + 5 = ?$ (12)

10) $0 + 1 + 5 + 2 = ?$ (8)

Use after *Alpha* Lesson 21

1) $4 + 2 + 2 + 7 = ?$ (15)

6) $0 + 1 + 3 + 3 = ?$ (7)

2) $5 + 3 + 1 + 3 = ?$ (12)

7) $3 + 3 + 3 + 3 = ?$ (12)

3) $7 + 1 + 2 + 1 = ?$ (11)

8) $2 + 4 + 1 + 9 = ?$ (16)

4) $3 + 4 + 2 + 0 = ?$ (9)

9) $3 + 5 + 2 + 4 = ?$ (14)

5) $1 + 5 + 2 + 6 = ?$ (14)

10) $4 + 0 + 8 + 1 = ?$ (13)

Use after *Alpha* Lesson 24

These combine addition and subtraction. You may need to go slowly with these at first.

1) $3 + 4 - 2 = ?$ (5)

6) $8 - 5 + 7 = ?$ (10)

2) $6 - 1 + 5 = ?$ (10)

7) $3 + 8 - 4 = ?$ (7)

3) $1 + 8 - 8 = ?$ (1)

8) $7 + 7 - 5 = ?$ (9)

4) $4 - 2 + 9 = ?$ (11)

9) $11 - 3 + 5 = ?$ (13)

5) $9 - 7 + 4 = ?$ (6)

10) $15 - 8 + 1 = ?$ (8)

Use after *Alpha* Lesson 27

You may shorten these if your student is not yet ready for the longer questions.

1) $1 + 2 - 1 + 5 = ?$ (7)

6) $1 + 9 - 8 + 9 = ?$ (11)

2) $4 + 1 - 0 + 6 = ?$ (11)

7) $6 + 6 - 6 - 6 = ?$ (0)

3) $8 - 4 + 3 + 5 = ?$ (12)

8) $7 + 5 + 0 - 8 = ?$ (4)

4) $3 + 9 - 6 + 4 = ?$ (10)

9) $18 - 9 - 5 + 1 = ?$ (5)

5) $14 - 9 - 1 + 3 = ?$ (8)

10) $6 + 2 - 7 + 3 = ?$ (4)

1) $7 + 2 + 8 = ?$ (17)

6) $3 + 4 + 1 + 3 = ?$ (11)

2) $1 + 2 + 4 = ?$ (7)

7) $2 + 1 + 4 + 5 = ?$ (12)

3) $5 + 3 + 2 = ?$ (10)

8) $1 + 2 + 1 + 2 = ?$ (6)

4) $6 + 3 + 6 = ?$ (15)

9) $4 + 1 + 2 + 9 = ?$ (16)

5) $8 + 0 + 5 = ?$ (13)

10) $1 + 5 + 3 + 3 = ?$ (12)

These review subtraction. Remember to go slowly at first.

1) $9 - 1 - 4 = ?$ (4)

6) $6 - 3 - 1 = ?$ (2)

2) $8 - 6 - 0 = ?$ (2)

7) $11 - 7 - 3 = ?$ (1)

3) $10 - 5 - 2 = ?$ (3)

8) $18 - 9 - 4 = ?$ (5)

4) $16 - 9 - 1 = ?$ (6)

9) $15 - 1 - 6 = ?$ (8)

5) $14 - 5 - 4 = ?$ (5)

10) $10 - 2 - 2 = ?$ (6)

These combine addition and subtraction. Don't try the longer problems unless the student is comfortable with the shorter ones.

1) $4 + 5 - 3 = ?$ (6)

6) $7 - 6 + 8 - 4 = ?$ (5)

2) $7 - 2 + 6 = ?$ (11)

7) $4 + 7 - 3 - 7 = ?$ (1)

3) $2 + 9 - 9 = ?$ (2)

8) $8 + 8 - 6 + 1 = ?$ (11)

4) $5 - 3 + 10 = ?$ (12)

9) $10 - 2 + 4 - 6 = ?$ (6)

5) $10 - 8 + 5 = ?$ (7)

10) $14 - 8 + 2 - 4 = ?$ (4)

These combine addition and subtraction. You may shorten these if your student is not yet ready for the longer questions.

1) $2 + 3 - 2 + 6 = ?$ (9)

6) $2 + 10 - 9 + 10 = ?$ (13)

2) $5 + 2 - 1 + 7 = ?$ (13)

7) $7 + 7 - 7 - 7 = ?$ (0)

3) $9 - 5 + 4 + 6 = ?$ (14)

8) $8 + 6 + 1 - 9 = ?$ (6)

4) $4 + 10 - 7 + 5 = ?$ (12)

9) $17 - 8 - 4 + 0 = ?$ (5)

5) $15 - 8 - 2 + 4 = ?$ (9)

10) $7 + 3 - 8 + 4 = ?$ (6)

Use after *Beta* Lesson 27

1) $4 + 4 - 6 + 9 = ?$ (11)

6) $9 + 8 - 9 + 1 = ?$ (9)

2) $8 + 2 - 3 + 3 = ?$ (10)

7) $5 + 9 - 6 - 5 = ?$ (3)

3) $7 - 5 + 6 + 10 = ?$ (18)

8) $10 + 2 - 7 + 9 = ?$ (14)

4) $6 + 8 - 9 + 5 = ?$ (10)

9) $15 - 1 - 5 + 8 = ?$ (17)

5) $17 - 10 - 4 + 4 = ?$ (7)

10) $5 + 9 - 4 + 8 = ?$ (18)

Use after *Gamma* Lesson 24

Example $2 \times 3 \times 1 = ?$ “Two times three times one equals what number?”

The student thinks, “ $2 \times 3 = 6$, and $6 \times 1 = 6$.” At first you will need to go slowly enough for him or her to verbalize the intermediate step. As skills increase, the student should be able to just give the answer.

1) $2 \times 3 \times 8 = ?$ (48)

6) $2 \times 2 \times 8 = ?$ (32)

2) $1 \times 7 \times 5 = ?$ (35)

7) $3 \times 2 \times 2 = ?$ (12)

3) $4 \times 2 \times 9 = ?$ (72)

8) $1 \times 9 \times 7 = ?$ (63)

4) $3 \times 3 \times 3 = ?$ (27)

9) $7 \times 2 \times 0 = ?$ (0)

5) $5 \times 1 \times 6 = ?$ (30)

10) $5 \times 4 \times 1 = ?$ (20)

Here are some more questions to read to your student. These include multiplication and addition. Read them left to right as written. Remember to go slowly at first.

1) $1 \times 3 + 9 = ?$ (12)

6) $3 \times 3 + 8 + 1 = ?$ (19)

2) $4 + 6 \times 5 = ?$ (50)

7) $5 + 2 \times 7 + 0 = ?$ (49)

3) $3 \times 2 + 3 = ?$ (9)

8) $2 + 8 \times 4 + 5 = ?$ (45)

4) $4 \times 8 + 1 = ?$ (33)

9) $8 \times 2 + 1 + 1 = ?$ (18)

5) $6 + 3 \times 8 = ?$ (72)

10) $2 \times 4 + 1 \times 5 = ?$ (45)

Use after *Gamma* Lesson 30

These questions include multiplication, addition and subtraction. Read them left to right as written.

1) $6 - 3 + 5 \times 1 = ?$ (8)

6) $1 \times 10 + 8 - 9 = ?$ (9)

2) $4 \times 3 - 8 + 7 = ?$ (11)

7) $12 - 7 + 4 \times 3 = ?$ (27)

3) $17 - 9 + 1 \times 6 = ?$ (54)

8) $6 \times 3 + 2 - 10 = ?$ (10)

4) $2 \times 2 + 7 - 1 = ?$ (10)

9) $5 + 0 \times 8 - 20 = ?$ (20)

5) $7 \times 3 - 1 + 6 = ?$ (26)

10) $15 - 8 + 3 \times 10 = ?$ (100)

Use after *Delta* Lesson 12

Note that the questions are intended to be read aloud in the order written. Do not worry about order of operations. These questions include addition, subtraction, and multiplication. Division will be included in Lesson 18. Try a few of these at a time, and remember to go quite slowly at first. Be sure your student is comfortable with the shorter problems before trying the longer ones.

1) $2 + 6 - 5 = ?$ (3)

6) $2 \times 3 - 1 + 8 = ?$ (13)

2) $7 - 4 \times 9 = ?$ (27)

7) $5 + 7 - 6 \times 7 = ?$ (42)

3) $2 \times 4 - 6 = ?$ (2)

8) $17 - 9 + 1 \times 6 = ?$ (54)

4) $7 + 6 - 4 = ?$ (9)

9) $7 + 3 \times 4 + 3 = ?$ (43)

5) $4 + 3 \times 7 = ?$ (49)

10) $3 \times 3 - 7 \times 8 = ?$ (16)

Here are some more mental math problems for you to read aloud to your student. Try a few at a time, going slowly at first. Be sure your student is comfortable with the shorter problems before trying the longer ones. Read the problems in order as written.

1) $42 \div 6 + 5 = ?$ (12)

6) $6 + 6 - 3 \div 3 = ?$ (3)

2) $3 \times 4 \div 6 = ?$ (2)

7) $45 \div 5 + 1 + 10 = ?$ (20)

3) $13 - 5 \div 2 = ?$ (4)

8) $18 - 9 + 7 \div 2 = ?$ (8)

4) $7 + 8 \div 3 = ?$ (5)

9) $2 \times 3 \times 4 \div 8 = ?$ (3)

5) $20 - 10 \div 5 = ?$ (2)

10) $72 \div 8 \div 3 \times 7 = ?$ (21)

Use after *Delta* Lesson 24

You may shorten these if the student is not ready for problems of this length. Read the problems in order as written.

1) $25 \div 5 + 3 \times 7 = ?$ (56)

6) $72 \div 9 - 1 \times 6 = ?$ (42)

2) $16 - 9 \times 2 + 1 = ?$ (15)

7) $44 + 1 \div 5 \div 3 = ?$ (3)

3) $2 + 3 \times 4 \div 2 = ?$ (10)

8) $6 - 5 + 11 \div 6 = ?$ (2)

4) $5 \times 6 \div 10 \times 6 = ?$ (18)

9) $2 \times 7 + 2 \div 2 = ?$ (8)

5) $25 - 1 \div 8 + 4 = ?$ (7)

10) $7 \times 7 - 1 \div 8 \times 5 = ?$ (30)

Use after *Epsilon* Lesson 3

Note that the questions are intended to be read aloud in the order written. Do not worry about order of operations. These questions include addition, subtraction, multiplication and division. There are also mental math problems in the *Epsilon Student Manual*, starting with Lesson 21D. Try a few at a time, and remember to go quite slowly at first.

1) $3 + 5 \times 6 - 3 = ?$ (45)

6) $54 \div 6 \div 3 \times 7 = ?$ (21)

2) $8 \times 3 \div 6 + 9 = ?$ (13)

7) $32 - 2 \times 3 \div 10 = ?$ (9)

3) $19 - 9 + 10 \div 5 = ?$ (4)

8) $7 - 5 \times 8 \div 4 = ?$ (4)

4) $27 \div 3 \times 5 + 2 = ?$ (47)

9) $7 \times 7 + 1 \div 5 = ?$ (10)

5) $5 + 4 \times 8 + 6 = ?$ (78)

10) $9 + 2 \times 4 - 5 = ?$ (39)

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|--------------------------------------|--|
| 1) $4 + 5 \times 2 \div 3 = ?$ (6) | 6) $19 - 3 \div 4 \times 7 = ?$ (28) |
| 2) $36 \div 4 - 2 \times 5 = ?$ (35) | 7) $9 \times 5 + 3 \div 6 = ?$ (8) |
| 3) $66 \div 6 + 4 \div 3 = ?$ (5) | 8) $21 \div 7 + 1 \times 5 = ?$ (20) |
| 4) $48 \div 8 \times 6 + 2 = ?$ (38) | 9) $3 \times 4 \div 2 \times 9 = ?$ (54) |
| 5) $6 + 7 - 4 \times 9 = ?$ (81) | 10) $7 \times 6 + 2 \div 11 = ?$ (4) |

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|--------------------------------------|---|
| 1) $24 \div 4 + 2 \times 6 = ?$ (48) | 6) $64 \div 8 - 2 \times 4 = ?$ (24) |
| 2) $15 - 8 \times 2 + 5 = ?$ (19) | 7) $25 + 2 \div 3 \times 6 = ?$ (54) |
| 3) $3 + 3 \times 5 \div 10 = ?$ (3) | 8) $3 \times 5 + 5 \div 2 = ?$ (10) |
| 4) $25 \div 5 \times 7 + 4 = ?$ (39) | 9) $56 \div 7 \div 2 \times 7 = ?$ (28) |
| 5) $50 - 1 \div 7 + 2 = ?$ (9) | 10) $9 \times 9 - 1 \div 10 = ?$ (8) |

Beginning with this lesson, there are also mental math problems on most of the Systematic Review pages in the *Epsilon Student Text*.

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|---|--------------------------------------|
| 1) $36 \div 6 + 3 \times 8 = ?$ (72) | 6) $27 \div 9 + 5 \times 7 = ?$ (56) |
| 2) $17 - 9 \times 3 + 2 = ?$ (26) | 7) $31 + 1 \div 8 \times 6 = ?$ (24) |
| 3) $3 + 4 \times 6 - 3 = ?$ (39) | 8) $13 - 8 \times 6 + 7 = ?$ (37) |
| 4) $4 \times 5 \div 10 \times 7 = ?$ (14) | 9) $3 \times 7 + 3 \div 8 = ?$ (3) |
| 5) $66 - 2 \div 8 + 9 = ?$ (17) | 10) $4 \times 7 + 8 \div 4 = ?$ (9) |