

## Mental Math

### Grade 8 – Test 1

The following items are designed to measure students' mental computation skills for concepts typically learned by October of 8<sup>th</sup> grade.

Have the students write their names at the top of a piece of paper and number from 1 to 20. Instruct the students to write the answers to the questions you are to read by the proper number. They will only have 5 seconds to do so before you state the next question.

Read the question number, then the question. Repeat it, wait 5 to 7 seconds, then read the next question.

1.  $36 + 8$
2. How many inches in 6 feet?
3. What is  $\frac{2}{3}$  of 24?
4. If  $X - 7 = 9$ , then what is X?
5. What is 82 times one tenth?
6. What is the reciprocal of 3?
7. If  $X + 2 = 8$ , what is X?
8. What is 1% of 200?
9. Six minus (4 and 5 tenths) =
10. Sean has 3 times as much money as Tracy has. If Sean has 90¢, how much does Tracy have?
11. Estimate the product of 82 times 304.
12. What is 49 divided by 10?
13. If a pound of chocolate cost \$4.16, what do 8 ounces cost?
14.  $\frac{5}{7} - \frac{2}{14}$
15. What is  $9^1$  equal to?
16. How many thirds in 2?
17. Pencils are 30¢ each and notebooks are 70¢ each. If Mark bought 4 pencils and 2 notebooks, how much did he spend?
18. What is 50% of 40?
19. What is the area of a triangle with a base of 6 and a height of 5?
20. What is  $\frac{1}{4}$  plus  $\frac{3}{4}$ ?

#### Answers

1. 44
2. 72
3. 16
4. 16
5. 8.2
6.  $\frac{1}{3}$
7. 6
8. 2
9. 1.5
10. 30¢
11. 24000
12. 4.9
13. \$2.08
14.  $\frac{4}{7}$
15. 9
16. 6
17. \$2.60
18. 20
19. 15
20. 1

## Mental Math

### Grade 8 – Test 2

The following items are designed to measure students' mental computation skills for concepts typically learned by January of 8<sup>th</sup> grade.

Have the students write their names at the top of a piece of paper and number from 1 to 20. Instruct the students to write the answers to the questions you are to read by the proper number. They will only have 5 seconds to do so before you state the next question.

Read the question number, then the question. Repeat it, wait 5 to 7 seconds, then read the next question.

- |  | <u>Answers</u>     |
|--|--------------------|
| 1. What is $\frac{1}{2}$ of $\frac{1}{8}$ ?  | 1. $\frac{1}{16}$  |
| 2. How many quarts in 6 gallons?   | 2. 24              |
| 3. What is 25% of 20?  | 3. 5               |
| 4. 8 is what % of 4?   | 4. 200             |
| 5. What is 3 and 2 tenths plus 7?  | 5. 10.2            |
| 6. Estimate the difference between 68 and 21.  | 6. 50              |
| 7. What is $2.2 \div 10$ ?   | 7. .22             |
| 8. If $x/4 = 8$ , then $x = ?$   | 8. 32              |
| 9. Round to tenths: 46.1762.   | 9. 46.2            |
| 10. What is 7 minus $1\frac{2}{3}$ ?   | 10. $5\frac{1}{3}$ |
| 11. $\frac{5}{8} + \frac{4}{8}$ as a mixed number.   | 11. $1\frac{1}{8}$ |
| 12. 5 tenths x 1 tenth.  | 12. .05            |
| 13. Write $4 \times 4 \times 4$ in exponential form.   | 13. $4^3$          |
| 14. If 20 plums cost \$1.60, what do 15 plums cost?  | 14. \$1.20         |
| 15. $4.8 \div 4$   | 15. 1.2            |
| 16. A five-sided polygon is called a _____.  | 16. pentagon       |
| 17. If $x + 3 = 12$ , then $x = ?$   | 17. 9              |
| 18. What is $\frac{1}{2}\%$ of 400?  | 18. 2              |
| 19. One of those large school buses has a capacity of 70 students. How many students can 4 of those buses carry? | 19. 280            |
| 20. $1^{12} = ?$   | 20. 1              |

## Mental Math

### Grade 8 – Test 3

The following items are designed to measure students' mental computation skills for concepts typically learned by March of 8<sup>th</sup> grade.

Have the students write their names at the top of a piece of paper and number from 1 to 20. Instruct the students to write the answers to the questions you are to read by the proper number. They will only have 5 seconds to do so before you state the next question.

Read the question number, then the question. Repeat it, wait 5 to 7 seconds, then read the next question.

- |   | <u>Answers</u>                   |
|---|----------------------------------|
| 1. Two and one-half tenths times 4.                         | 1. 10                            |
| 2. Shirts are 2 for \$15.00. How much would 10 shirts cost? | 2. \$75.00                       |
| 3. Give the reciprocal of $\frac{2}{3}$ .                   | 3. $\frac{3}{2}$                 |
| 4. What is 100% of 6?                                       | 4. 6                             |
| 5. Write 48 thousandths as a decimal.                       | 5. .048                          |
| 6. $263 - 4 =$  | 6. 259                           |
| 7. 8 minus four and $\frac{1}{5}$ .                         | 7. $3\frac{4}{5}$                |
| 8. If $x = 8$ , what $2\frac{1}{2}x$ ?                      | 8. 20                            |
| 9. Round to the nearest hundred: 463.293.                   | 9. 500                           |
| 10. How many days in 12 weeks?                              | 10. 84                           |
| 11. $76 \div 10 =$  | 11. 7.6                          |
| 12. 3 is what % of 12?                                      | 12. 25%                          |
| 13. $6 \times .3$   | 13. 1.8                          |
| 14. Estimate the sum of 89 and 93.                          | 14. 180                          |
| 15. What is 5% of 40?                                       | 15. 2                            |
| 16. If $\frac{x}{3} = 12$ , then $x =$                      | 16. 36                           |
| 17. What is $\frac{1}{2}$ of 19?                            | 17. 9.5                          |
| 18. Write 60% as a fraction.                                | 18. $\frac{6}{10} = \frac{3}{5}$ |
| 19. $\frac{3}{5}$ of 20.                                    | 19. 12                           |
| 20. What is the perimeter of a 3 by 4 rectangle?            | 20. 14                           |

## Mental Math

### Grade 8 – Test 4

The following items are designed to measure students' mental computation skills for concepts typically learned by May of 8<sup>th</sup> grade.

Have the students write their names at the top of a piece of paper and number from 1 to 20. Instruct the students to write the answers to the questions you are to read by the proper number. They will only have 5 seconds to do so before you state the next question.

Read the question number, then the question. Repeat it, wait 5 to 7 seconds, then read the next question.

1.  $-5 \times -3$
2. Round 0.486 to the nearest tenth.
3. How many hours from 8 a.m. to 3 p.m.?
4. What is 20% of 25?
5. What is the quotient of 160 divided by 20?
6. What is the area of a square with a side of 5 inches?
7.  $-6 + -1 =$
8. Write  $\frac{1}{4}$  as a decimal.
9. Give the reciprocal of  $1\frac{1}{4}$ .
10. What is the square root of 36?
11.  $(6 + 8) \div 2 - 6 =$
12.  $2^3 =$
13. May bought  $2\frac{1}{2}$  yards at \$6 a yard. How much did she spend?
14. Write  $66\frac{2}{3}\%$  as a fraction.
15.  $-4 + +9.$
16.  $25 \times 200.$
17.  $-24 \div 8 =$
18. If 8 bananas cost 82¢, how much do 32 bananas cost?
19. What is 10% of 6?
20.  $2\frac{1}{2} + 4\frac{1}{2} = ?$

#### Answers

1. 15
2. .5
3. 7
4. 5
5. 8
6. 25
7. -7
8. .25
9.  $\frac{4}{5}$
10. 6
11. 1
12. 8
13. \$15
14.  $\frac{2}{3}$
15. 5
16. 5000
17. -3
18. \$3.28
19. .6
20. 7