

Mental Math – 5th Grade

1. If you begin with one-hundred cookies and you give three cookies to each of your thirty friends, how many cookies will you have left?
2. What is the average age of a group of six kids aged twelve, ten, eight, eight, two, and two?
3. Start with the product of fifteen and twelve. Divide by six. Finally, multiply by five. What is the final result?
4. One angle in an isosceles triangle is one-hundred degrees. What is the degree measure of one of the other two angles?
5. If the volume of a cube is two-hundred sixteen, what is the length of one of the cube's edges?

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6. How many days are in eleven weeks and four days?
7. Start with twenty. Subtract fourteen. Multiply by twenty. Finally, subtract fourteen. What is the final result?
8. If you have two quarters, five pennies, and three dimes in your pocket, how many cents do you have in your pocket?
9. An elementary school buys twenty-four packs of erasers and each pack has four erasers. How many erasers did the school buy?
10. What is the sum of one-fifth and one-third? Express your answer as a reduced fraction.

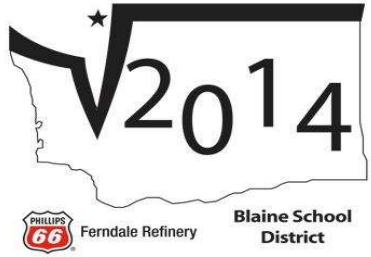
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11. Using a fair six-sided die, what is the probability of rolling a square number? Express your answer as a reduced fraction.
12. What is one-hundred twenty-four divided by four?
13. What is the positive difference between the product of thirty-five and twenty-seven and the product of thirty-five and seventeen?
14. How many distinct lines of reflectional symmetry does a square have?
15. What is the positive difference between six-hundred twenty-eight and one-hundred twenty-nine?

OVER →

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16. A pentagon has sides of equal length, and its perimeter is one-hundred twenty. What is the length of one side of this pentagon?
17. What is the least common multiple of nine and twelve?
18. Russell Wilson is five feet, eleven inches tall. How many inches tall is he?
19. Joe wins two out of every three chess games he plays. If he plays thirty-six games, how many games will he win?
20. If the height of a triangle is eight and the area of the triangle is twenty-four, what is the length of the base?



Mental Math – 6th Grade

1. Start with the product of fifteen and twelve. Divide by six. Finally, multiply by five. What is the final result?
2. One angle in an isosceles triangle is one-hundred degrees. What is the degree measure of one of the other two angles?
3. If the volume of a cube is two-hundred sixteen, what is the length of one of the cube's edges?
4. If Alex has six times as many marbles as Barb, Barb has thirteen more marbles than Corie, and Corie has twelve marbles, how many marbles does Alex have?
5. What is the positive difference between the product of twelve and twenty-one and the product of thirteen and twenty-one?

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6. If you have two quarters, five pennies, and three dimes in your pocket, how many cents do you have in your pocket?
7. An elementary school buys twenty-four packs of erasers and each pack has four erasers. How many erasers did the school buy?
8. What is the sum of one-fifth and one-third? Express your answer as a reduced fraction.
9. A rectangle has a perimeter of one-hundred forty and the length of one of the longer sides is sixty-five. What is the length of one of the shorter sides?
10. The first term of a sequence is sixty-two. Each term after the first term is seven less than the previous term of the sequence. What is the fourth term of this sequence?

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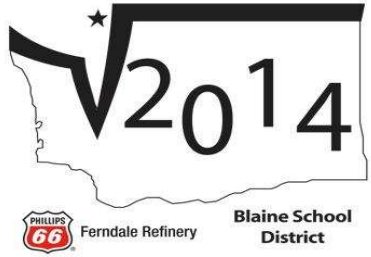
11. What is the positive difference between the product of thirty-five and twenty-seven and the product of thirty-five and seventeen?
12. How many distinct lines of reflectional symmetry does a square have?
13. What is the positive difference between six-hundred twenty-eight and one-hundred twenty-nine?

OVER →

14. If Charles earns five dollars a day and Abigail earns eleven dollars a day, how many dollars would the two of them earn combined if Charles worked nine days and Abigail worked five days?
15. What is the sum of twelve, negative seventeen, forty, negative thirty-three, and twenty-three?

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16. Russell Wilson is five feet, eleven inches tall. How many inches tall is he?
17. Joe wins two out of every three chess games he plays. If he plays thirty-six games, how many games will he win?
18. If the height of a triangle is eight and the area of the triangle is twenty-four, what is the length of the base?
19. What is the probability of drawing either a five or a heart from a standard deck of fifty-two cards? Express your answer as a reduced fraction.
20. Start with four-hundred. Divide by eight. Add forty-five. Finally, divide by five. What is the final result?



Mental Math – 7th Grade

1. If the volume of a cube is two-hundred sixteen, what is the length of one of the cube's edges?
2. If Alex has six times as many marbles as Barb, Barb has thirteen more marbles than Corie, and Corie has twelve marbles, how many marbles does Alex have?
3. What is the positive difference between the product of twelve and twenty-one and the product of thirteen and twenty-one?
4. What is the positive difference between the sum of the first six positive even integers and the sum of the first five positive odd integers?
5. Five-hundred twenty-eight hours is equivalent to how many days?

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6. What is the sum of one-fifth and one-third? Express your answer as a reduced fraction.
7. A rectangle has a perimeter of one-hundred forty and the length of one of the longer sides is sixty-five. What is the length of one of the shorter sides?
8. The first term of a sequence is sixty-two. Each term after the first term is seven less than the previous term of the sequence. What is the fourth term of this sequence?
9. What is the sum of the positive integral factors of sixteen?
10. The four interior angles in a quadrilateral are x , "two x ", "three x ", and "four x ". What is the degree measure of the smallest angle?

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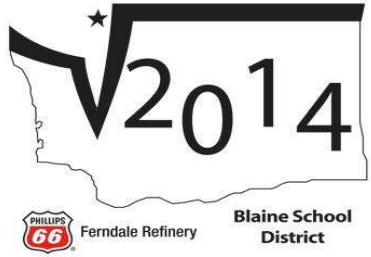
11. What is the positive difference between six-hundred twenty-eight and one-hundred twenty-nine?
12. If Charles earns five dollars a day and Abigail earns eleven dollars a day, how many dollars would the two of them earn combined if Charles worked nine days and Abigail worked five days?
13. What is the sum of twelve, negative seventeen, forty, negative thirty-three, and twenty-three?
14. What is twenty percent of the sum of twelve and forty-eight?

OVER →

15. When the fraction twenty-five one-hundred-twenty-fifths is reduced to lowest terms, what is the sum of the numerator and denominator?

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16. If the height of a triangle is eight and the area of the triangle is twenty-four, what is the length of the base?
17. What is the probability of drawing either a five or a heart from a standard deck of fifty-two cards? Express your answer as a reduced fraction.
18. Start with four-hundred. Divide by eight. Add forty-five. Finally, divide by five. What is the final result?
19. If a square with a perimeter of twenty is split into two congruent rectangles, what is the sum of the two rectangles' perimeters?
20. What is the product of the reciprocals of two, four, and eight, expressed as a reduced fraction?



Mental Math – 8th Grade

1. What is the positive difference between the product of twelve and twenty-one and the product of thirteen and twenty-one?
2. What is the positive difference between the sum of the first six positive even integers and the sum of the first five positive odd integers?
3. Five-hundred twenty-eight hours is equivalent to how many days?
4. What is the product of five factorial and four factorial divided by the product of three factorial and two factorial?
5. The number “two three one” in base-four equals what base-ten number?

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6. The first term of a sequence is sixty-two. Each term after the first term is seven less than the previous term of the sequence. What is the fourth term of this sequence?
7. What is the sum of the positive integral factors of sixteen?
8. The four interior angles in a quadrilateral are x , “two x ”, “three x ”, and “four x ”. What is the degree measure of the smallest angle?
9. What percent of two-hundred fifty is four-hundred?
10. If you write the numbers from one to one-hundred, inclusively, how many times will you have written the digit one?

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11. What is the sum of twelve, negative seventeen, forty, negative thirty-three, and twenty-three?
12. What is twenty percent of the sum of twelve and forty-eight?
13. When the fraction twenty-five one-hundred-twenty-fifths is reduced to lowest terms, what is the sum of the numerator and denominator?
14. What is one-and-one-third divided by one-sixth?
15. What is the sum of the prime numbers that are greater than forty but less than fifty?

OVER →

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16. Start with four-hundred. Divide by eight. Add forty-five. Finally, divide by five. What is the final result?
17. If a square with a perimeter of twenty is split into two congruent rectangles, what is the sum of the two rectangles' perimeters?
18. What is the product of the reciprocals of two, four, and eight, expressed as a reduced fraction?
19. How many zeroes will be in the product of two, fifty, and one-thousand?
20. What is the volume of a cube with a surface area of one-hundred fifty?