



**2016 Summer Math Reinforcement Packet  
for Students Entering 8<sup>th</sup> Grade  
"30 Days of Math"**

Adapted from <https://www.aea267.k12.ia.us>

Reinforcing and practicing math skills learned during the school year can be exceptionally beneficial to academic growth in the Fall. The 8<sup>th</sup> grade math curriculum will expand on the knowledge and skills taught in 7<sup>th</sup> grade. Help your child be prepared by having him/her complete a set of review problems for 30 days this summer! Spending 5 – 10 minutes each day sharpening math skills will give your child the boost they need to start the year off well! Remember to show your work on this page or a separate sheet of paper!

STUDENT'S NAME: \_\_\_\_\_

Day 1

1. Round 24,269 to nearest thousand.
  2.  $24 + 16 \div 4 = \underline{\quad}$
  3.  $2^3 \times 8 = \underline{\quad}$
  4. Barry made \$20.00 last week. Sue made \$11.87. How much more had Barry made?
  5.  $276 + 496 + 1986 = \underline{\quad}$
  6.  $7007 - 3648 = \underline{\quad}$
  7. Each Booster Club member sold 54 candles. How many candles did the 22 members sell?
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Day 2

1.  $2 \times 5 + 3 \times 2 - 5 + 3 = \underline{\quad}$
2.  $60 \times 2000 = \underline{\quad}$
3. Larry needed to repair chairs in the school auditorium. There are 24 rows of chairs with 25 chairs in each row. One hundred forty-seven of the chairs are in good shape. How many need repair?

4.  $\$1600 - \$599 = \underline{\hspace{2cm}}$
5.  $\frac{1}{3}$  of 24 =  $\underline{\hspace{2cm}}$
6. Mr. Sanchez had 21 students in the first period, 31 in period 2, 34 in period 3, 29 in period 4, 28 in period 5. What is the total number of students?
7. Joe bought \$8.00 worth of candy. If there is 4¢ tax on each dollar, what would be the total tax?
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## Day 3

1.  $\$.85 + \$2.85 + \$28.50 = \underline{\hspace{2cm}}$
2.  $23 \times 82 = \underline{\hspace{2cm}}$
3. Joan had 382 apples to divide among 33 bags. If she gave an even amount to each bag, how many will she have left?
4.  $8 + 8.80 + .88 + .08 = \underline{\hspace{2cm}}$
5.  $25 \times 300 = \underline{\hspace{2cm}}$
6. Mary bought a dress for \$40.50. If tax is 4¢ per dollar, what would be the total tax?
7. Cal had a marble with a diameter of 4.623 mm. Marci had a marble with a diameter of 4.599 mm. Who had the smaller marble?
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## Day 4

1.  $580 \times 10 \times 0 = \underline{\hspace{2cm}}$
2.  $2.6 + 5 = \underline{\hspace{2cm}}$
3.  $15 \times 3 - 6 + 2 \times 8 - 55 = \underline{\hspace{2cm}}$
4.  $1260 \div 36 = \underline{\hspace{2cm}}$
5. Write the decimal: three hundred fifteen ten – thousandths.
6. Kim bought a \$4.35 blouse, a \$16.20 jacket and a \$4.5 billfold. If she started with \$30, how much would she have left?
7. Mary worked 2.8 hours on Monday, 3.9 on Tuesday, and 3.9 on Wednesday. How many hours did she work those three days?
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## Day 5

- Place in order from least to greatest: 3.848, 3.48, 3.844, 3.4
  - $28.4 + 9.83 + 27.66 = \underline{\hspace{2cm}}$
  - $\$15.00 - (3.40 \times 2) = \underline{\hspace{2cm}}$
  - Solve for  $x$ :  $358 + x = 1000$
  - Round .006 to the nearest hundredth.
  - Joe had three widths of paper. One was .067 inches, another .055 inches, and the third .097 inches. What is the total width of the three papers?
  - Adult tickets are \$2.50 and children's tickets are \$1.50. One family bought 5 adult tickets and 3 children's tickets. How much did that family spend?
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## Day 6

- $3\frac{2}{3} + 6\frac{1}{3} = \underline{\hspace{2cm}}$
  - $5\frac{1}{2} - 3\frac{4}{5} = \underline{\hspace{2cm}}$
  - $\frac{3}{5} \times \frac{1}{6} = \underline{\hspace{2cm}}$
  - $\frac{5}{7} \times \frac{1}{4} = \underline{\hspace{2cm}}$
  - $\frac{2}{5} \div \frac{1}{3} = \underline{\hspace{2cm}}$
  - $2\frac{1}{5} - \frac{7}{8} = \underline{\hspace{2cm}}$
  - $3\frac{1}{4} \times 1\frac{1}{2} = \underline{\hspace{2cm}}$
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## Day 7

- A gallon of paint covers 400 square feet. How many gallons of paint are needed to cover a fence 250 feet long and 8 feet high?
- The Sumner basketball team scored 354 points in the first 6 games. It had three more games to play. If the team scores at the same rate as the first 6 games, what would be their total number of points for the 9 games?
- $\$8.19 + \$3.77 + \$5.29 = \underline{\hspace{2cm}}$
- $3425 \div 27 = \underline{\hspace{2cm}}$
- $4\frac{1}{2} - 2\frac{1}{4} = \underline{\hspace{2cm}}$
- $4x = 78$

7. Joe's time in the first race was 29.65. His second time was 30.23. How much faster was his first time?

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Day 8

1. A tank holding 14,860 L of water empties at the rate of 40 L each minute. How many minutes will it take to empty the tank?

2.  $18 - 2.659 = \underline{\hspace{2cm}}$

3.  $(0.2 \times 0.3) \times 0.2 = \underline{\hspace{2cm}}$

4.  $6000 \div 15 = \underline{\hspace{2cm}}$

5.  $846 - 2.865 = \underline{\hspace{2cm}}$

6. Frank's distance in the long jump on his three jumps were 12.8 m, 11.9 m, and 12.2 m. What was his average jump?

7. In a relay race the four boy's times were 58.1, 59.3, 57.5, and 58.0. What was the difference between the slowest and fastest time?

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Day 9

1. Solve for x:  $2x - 10 = 38$

2. Solve for x:  $\frac{3}{4}x + 6 = 12$

3. Find the average of Jim's test grades: 85, 90, 82, 65, 85.

4.  $5 \div \frac{1}{6} = \underline{\hspace{2cm}}$

5.  $609.47 - 193.66 = \underline{\hspace{2cm}}$

6. How much money? 30 quarters, 10 dimes, 6 nickels, 2 pennies

7. Mike was in a car race. His time was 46.83 seconds. For every cone that was knocked down, .7 second was added to the time. If Mike knocked down 7 cones, what was his total time?

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Day 10

Solve for  $x$ .

1.  $\frac{3}{8} = \frac{x}{6}$

2.  $2.5x = 100$

3.  $\frac{6}{7} = \frac{18}{x}$

4. 3 out of 5 students selected breakfast as their favorite meal. In a group of 30 students, how many would you expect to select breakfast as their favorite meal?

5. Mike can travel on 300 miles on 10 gallons of gas. What is the unit rate?

6.  $7.9 \times 8.65 = \underline{\quad}$

7.  $5.14 + .9 + 3 = \underline{\quad}$

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Day 11

1. Bob bought 3 rolls of paper for 83¢ each. How much money will he get back from a ten dollar bill?

2. A lady earns \$56.40 per day. If she works 8 hours per day, what is her hourly rate?

3. What is 30% of 80?

4. Express 0.15 as a fraction in simplest form.

5. Find the average of Kim's homework grades: 100, 95, 0, 95.

6.  $8.8 - .08 = \underline{\quad}$

7.  $500 - 126.8 = \underline{\quad}$

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Day 12

1. Marcia cuts a 42 foot rope in 37 pieces that are each 1.1 foot long. How much extra rope does she have?
2.  $4683 + 9415 + 6859 = \underline{\hspace{2cm}}$
3.  $5/6$  of 72 =  $\underline{\hspace{2cm}}$
4. Each kilogram equals 2.2 lbs. How many pounds does Roxine weigh if she is 50.8 kg.?
5. 7 quarts equal how many gallons?
6. A cookie recipe calls for  $3/4$  cups of sugar for each dozen cookies baked. How much sugar is needed if Mary needs to make 72 cookies?
7. Express 120% as a decimal.

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Day 13

1.  $5^4 = \underline{\hspace{2cm}}$
2. Joe traveled 10560 feet. How many miles did he travel?
3. Three adult horses were weighed. Their weight was 818 pounds, 619 pounds and 756 lbs. What was their average weight?
4. Write 36,000 in scientific notation.
5. 35 feet =  $\underline{\hspace{2cm}}$  inches
6.  $1^6 = \underline{\hspace{2cm}}$
7.  $4 \times (-6) = \underline{\hspace{2cm}}$

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Day 14

1. It is  $4.3 \times 10^3$  miles to California. It is  $2.6 \times 10^4$  to Alaska. How much farther is Alaska than California?
2.  $\frac{6}{7} \times 1\frac{3}{4} = \underline{\hspace{2cm}}$
3.  $5^0 = \underline{\hspace{2cm}}$
4.  $2001 - 235 = \underline{\hspace{2cm}}$
5. What time is 1 hour and forty minutes after 10:36?

6. Bob is working on construction for \$8.86 per hour. He worked 6846 hours in 1985. What was his pay?
7.  $1000 = 10^?$

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Day 15

1. A recipe calls for  $1\frac{1}{2}$  cups of white flour and  $2\frac{3}{4}$  cups of whole wheat flour. How much flour is needed in all?
2. Arrange from least to greatest: 1.4, 1.04, 0.140, 0.014
3. Jim got 3 hits in 10 at bat. What percent of the time did he get hits?
4. A wrecking company bought 12 cars for \$130 each and 13 cars for \$80 each. How much was paid for the 25 cars?
5.  $5 \times 10^2 = \underline{\quad}$
6. How much money? 18 quarters, 28 dimes, 6 nickels
7. What is the Greatest Common Factor (GCF) of 18 and 24?

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Day 16

1. Which is greater? 0.125 or 0.13
  2. 9 ft. =        yds.
  3. A stack of 100 papers is 2.6 cm high. What is the thickness of each sheet?
  4. Ed won 12 out of 15 games of chess. What fraction of the games did he lose?
  5. Find the average of Sam's test grades: 74, 78, 80, 70, 92
  6. Write  $\frac{29}{3}$  as a mixed number.
  7. Express 0.82 as a fraction in simplest form.
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## Day 17

1.  $197 \times 56 = \underline{\hspace{2cm}}$
  2.  $4.5 \times 11 = \underline{\hspace{2cm}}$
  3.  $26296 \div 4 = \underline{\hspace{2cm}}$
  4. Choose the most sensible answer: Mike has finished            of his book.
    - a) 125%
    - b) 2.4
    - c)  $\frac{3}{4}$
  5. What is  $\frac{3}{4}$  of 24?
  6. What percent is  $\frac{3}{4}$ ?
  7. On a map 1 cm = 13 km. What distance is represented by 8 cm?
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## Day 18

1. Hank gets 22 miles per gallon. How many gallons are needed to drive 594 miles?
  2. Write a decimal for  $\frac{3}{25}$ .
  3.  $0.82 = \underline{\hspace{2cm}}\%$
  4.  $40,247 + 163 + 9582 = \underline{\hspace{2cm}}$
  5. Eight pounds of shrimp costs \$46. How much is that per pound?
  6. Find the median for 2, 9, 3, 13, 7
  7. Write an algebraic expression for *8 less than twice a number*.
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## Day 19

1. Tina swam 25 laps Monday and 32 laps Tuesday. How many must she average the next three days to reach her goal of 30 laps each day?
2. Tom is to be at a restaurant by 1:00 p.m. He leaves home at 11:50 and arrives 35 minutes later. How early is he?
3. A fruit basket has 6 apples, 8 bananas and 4 oranges. Write the probability of selecting an apple,  $P(\text{apple})$ .



- When rolling a 6-side number cube, what is the probability of rolling an even number,  $P(\text{even})$ ?
  - How many different outfit combinations does Sally get with 4 shirts, 2 pants, and 2 pairs of shoes?
  - $2.12 \times 0.15 = \underline{\hspace{2cm}}$
  - $1.00 - 0.135 = \underline{\hspace{2cm}}$
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## Day 20

- Write an algebraic expression for *the sum of a number and twelve*.
  - $-12 \div (-4) = \underline{\hspace{2cm}}$
  - $13 - (-8) = \underline{\hspace{2cm}}$
  - $-8(4) = \underline{\hspace{2cm}}$
  - $6 + (-3) = \underline{\hspace{2cm}}$
  - $36 - 42 = \underline{\hspace{2cm}}$
  - $-18 - (-10) = \underline{\hspace{2cm}}$
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## Day 21

- $(-8) - 10 = \underline{\hspace{2cm}}$
  - $28 + (-14) = \underline{\hspace{2cm}}$
  - $(-5) + (-21) + 8 = \underline{\hspace{2cm}}$
  - $(-14)(-26) = \underline{\hspace{2cm}}$
  - $445 \div (-5) = \underline{\hspace{2cm}}$
  - $12 - (-18) = \underline{\hspace{2cm}}$
  - Solve for  $x$ :  $3x - 18 = 24$
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## Day 22

- How much fence is needed to enclose a rectangular yard which is 85 ft. by 60 ft.
- Fill in operation symbols to make the expression true.  $8 \underline{\hspace{0.5cm}} 4 \underline{\hspace{0.5cm}} 2 \underline{\hspace{0.5cm}} 1 = 30$
- What is the radius of a circle with a diameter of 6 in.?

- 16 is what % of 80?
  - A market sells 6 ears of sweet corn for 85¢. How much would 1 1/2 dozen ears cost?
  - Change 150% to a decimal.
  - What is the reciprocal of 4?
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## Day 23

- Write 2,060,000,000 in scientific notation.
  - Find the interest on \$400 at 5% for 3 years.
  - List the first five multiples of 12.
  - Is 39 a prime or composite number?
  - Mark Smith is buying new tires for his car. The cost is \$264.00. If he buys the tires the last week in June, he will get a discount of 16%. What will be the cost of the tires the last week of June?
  - $9.84 \times 6.52 = \underline{\hspace{2cm}}$
  - What is the square root of 400?
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## Day 24

- A bee is  $\frac{7}{24}$  inches long. A fly is  $\frac{3}{8}$  inches longer. How long is the fly?
- Find the Area of a circle with a radius of 10 inches.
- Find the perimeter of a garden with dimensions 8in X 12in.
- What is the area of a triangle whose base is 12 in. and height is 16 in.?
- What is term used to classify an 8-sided polygon?
- What is the area of a trapezoid whose bases are 12 in. and 16 in. and height is 14 in.?

7. Write 821,000,000 in scientific notation.

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Day 25

1. Freddy needed to paint the walls of his bedroom. The room is 12 by 12. If the ceiling is 8 foot high, how many square feet needs to be painted?
2. 265 is what percent of 800?
3. What is 35% of 60?
4. If 26 people eat 130 apples, how many people will be needed to eat 2600 apples?
5. In 2004 there were 8400 people in Podunk, Iowa. In 2007 there were 120 percent of that amount. How many people in Podunk in 2007?
6. Write 0.0045 in scientific notation.
7. Express  $\frac{3}{8}$  as a decimal.

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Day 26

1. A basement floor is 6241 square feet. If the room is square, what are the measurements of the room?
2. Find the cost of 3 tires if they sell 4 for \$228.72.
3. Write  $6\frac{1}{8}$  as an improper fraction.
4. Joe makes 60% of all the free throw shots he takes. If he attempts 120 shots, how many would you expect him to make?
5. Mr. Smith has a 4 digit combination lock. How many different combinations can he create if no digit can be repeated?

6. A bag of marbles has 4 blue, 3 yellow and 5 white marbles. What is the probability of randomly selecting a yellow marble?
7. In the same bag of marbles used in #6, find the probability of randomly selecting a white marble, followed by a blue marble.

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Day 27

1. Find the square root of 81.
2. What is the Least Common Multiple of 12 and 9?
3. Marcie can type 60 words per minute. How long it take her to type a 5 page report, if each page has 220 words.
4. At High-Kick Dance Studio, there are 8 female performers for every 2 male performers. In a class of 80 students, how many would you expect to be male?
5. In a recent survey, 75% of the participants selected the beach as their favorite weekend getaway destination. Out of 3500 participants, how many people did not select the beach as the favorite destination?
6. Express 0.8 as a fraction in simplest form.
7. Is 9 a prime or composite number?

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Day 28

1. Find the Volume of a rectangular prism with dimensions 3 cm X 5 cm X 6 cm.
2. The Circumference of a circle with a diameter of 3in.
3. How much money? 14 quarters, 42 dimes, 16 nickels, 20 pennies.

4. Solve for  $x$ :  $\frac{8}{15} = \frac{72}{x}$
5. 15 is 25% of what number?
6. Express  $\frac{1}{9}$  as a decimal.
7. Express 128% as a decimal.

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Day 29

1. Express 0.0000515 in scientific notation.
2. 4 years = \_\_\_\_\_ days
3.  $\frac{2}{3} \div \frac{6}{5} = \underline{\hspace{2cm}}$
4.  $2\frac{1}{2} \times \frac{7}{8} = \underline{\hspace{2cm}}$
5.  $1.5x = 2.25$
6. In an isosceles triangle, how many sides are congruent?
7.  $\angle A$  and  $\angle B$  are complementary. If the measure of  $\angle A$  is  $64^\circ$ , what is the measure of  $\angle B$ ?

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Day 30

1.  $\angle A$  and  $\angle B$  are vertical angles. If the measure of  $\angle A$  is  $112^\circ$ , what is the measure of  $\angle B$ ?
2.  $3^5 = \underline{\hspace{2cm}}$
3.  $5^3 = \underline{\hspace{2cm}}$
4.  $\sqrt{121} = \underline{\hspace{2cm}}$
5.  $\sqrt{81} = \underline{\hspace{2cm}}$
6.  $8^2 = \underline{\hspace{2cm}}$
7. What is the term used to classify a triangle with no congruent sides?

8. What is one thing you would like your teacher to know about you?