

Summer Math Homework for 2018-2019 7th Graders

Dear incoming 7th grade students,

Congratulations on making it through your first year of middle school and welcome to 7th grade. The 7th grade math curriculum is a rigorous curriculum that builds on what you have learned in 6th grade math. In order to help prepare you for a successful transition, a summer math break packet is attached.

It is due the first day of school (**Tuesday, September 4th**) and will be counted as a first quarter assessment grade.

We look forward to meeting you in the fall!

Sincerely,
GPBXM Math team

Dear Parents and Guardians,

Every summer students forget key concepts they learn, which means they have to work that much harder the next school year to relearn the material they forgot. To combat this, the Girls Prep Bronx Middle School math team has created a math packet for students to complete throughout the summer. This will keep the skills they learned this year fresh, while preparing them to be successful in the next year's math class.

It is due the first day of school (**Tuesday, September 4th**) and will be counted as a first quarter assessment grade.

Throughout the summer your student should:

- Complete the packet, doing a few problems each week.
- Show all work for the problems within the packet or on lined paper. (Students will not receive credit if they do not show all of their work. Additional paper should be stapled to the packet.)
- Write all answers neatly on the answer sheet (attached to the back of this packet).
- Visit websites listed below to review concepts and master fraction concepts: equivalency, add, subtract, divide, multiply etc. Constant practice will help students more easily understand pre-Algebra concepts.

Note: If you misplace the packet, it can be printed from our website. You could also contact the main office.

Sincerely,
GPBXM Math team

Helpful websites

www.stmath.com

www.khanacademy.com

www.ixl.com

DUE Tuesday, September 4th

Directions: There are seven (7) weeks of homework included in this packet. The calendar below outlines a recommended pacing guide that you can use to complete this packet in order to practice these skills AND enjoy your break ☺

Homework Expectations:

- Completed in pencil (*NO PEN*)
- All work is shown, *assignment is incomplete if work is not shown*
- You *MAY* use a calculator, but you must show work!

July 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Week 1: Questions 1-3	3 Week 1: Questions 4-6	4	5 Week 1: Questions 7-10	6	7
8	9 Week 2: Questions 1-4	10 Week 2: Questions 5-8	11 Week 2: Questions 9-11	12 Week 2: Questions 12-14	13	14
15	16 Week 3: Questions 1-3	17 Week 3: Questions 5-8	18 Week 3: Questions 9-11	19 Week 3: Questions 12-14	20	21
22	23 Week 4: Questions 1-3	24 Week 4: Questions 4-6	25 Week 4: Questions 7-10	26	27	28
29	30 WEEK OFF	31 WEEK OFF				

August 2018

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 WEEK OFF	2 WEEK OFF	3 WEEK OFF	4
5	6 Week 5: Questions 1-3	7 Week 5: Questions 4-6	8 Week 5: Questions 7-10	9	10	11
12	13 Week 6: Questions 1-3	14 Week 6: Questions 4-6	15 Week 6: Questions 7-10	16	17	18
19	20 Week 7: Student Reflection: Questions 1 and 2	21 Week 7: Student Reflection: Questions 3 and 4	22	23	24	25
26	27	28	29	30	31	

7th Grade Summer Break Answer Sheet

Name: _____

Directions: Write your answers on the answer lines below. Show all your work in the packet!

Week 1: Operations with Decimals

- | | | |
|-----------|----------|----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | | |

Week 2: Operations with Fractions

- | | | |
|-----------|-----------|-----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | 11. _____ | 12. _____ |
| 13. _____ | 14. _____ | |

Week 3: Exponents

- | | | |
|-----------|-----------|-----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | 11. _____ | 12. _____ |
| 13. _____ | 14. _____ | |

Week 4: Percent of a Quantity

- | | | |
|-----------|----------|----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | | |

Week 5: Percent of a Quantity

- | | | |
|-----------|----------|----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | | |

Week 6: One-Step Equations

- | | | |
|-----------|----------|----------|
| 1. _____ | 2. _____ | 3. _____ |
| 4. _____ | 5. _____ | 6. _____ |
| 7. _____ | 8. _____ | 9. _____ |
| 10. _____ | | |

Week 1:

Operation with Decimals: Simplify. Re-write each problem and show your work. Do NOT use a calculator!

1.) $5.038 + 2.96$

2.) $16 \div 1.6 + 0.517$

3.) $27 - 10.4$

4.) $9.006 - 4.44$

5.) $4.8 \cdot 6.9$

6.) $0.05 \cdot 0.7$

7.) $17.03 \div 9$

8.) $4.82 + 45$

9.) $3.25 \div 0.5$

10.) $23.24 \div 2.8$

Week 2:

Operations with Fractions: Simplify. Write your answer in lowest terms. Do NOT use a calculator!

1.) $\frac{3}{8} + \frac{1}{4}$

2.) $6\frac{1}{2} + 3\frac{1}{9}$

3.) $5\frac{1}{3} - 2\frac{1}{4}$

4.) $6 + 3\frac{3}{8}$

5.) $2\frac{1}{6} + 2\frac{7}{8}$

6.) $7\frac{1}{8} - 2\frac{3}{4}$

7.) $20 - 8\frac{3}{4}$

8.) $\frac{5}{9} \div \frac{1}{3}$

9.) $\frac{11}{12} \cdot 3$

10.) $\frac{5}{16} \cdot \frac{4}{5}$

11.) $5\frac{1}{2} \cdot 4\frac{3}{4}$

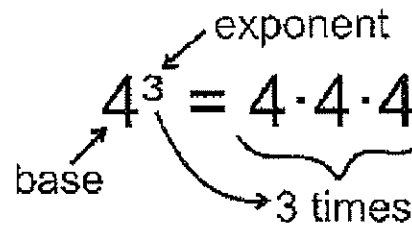
12.) $3 \cdot 5\frac{2}{3}$

13.) $5 \div \frac{2}{5}$

14.) $9\frac{1}{4} \div 2\frac{1}{4}$

Week 3:

Exponents: Follow the directions for each section.



Write each exponent in *expanded form*.

Example: $5^3 = 5 \cdot 5 \cdot 5$

1.) $4^8 =$

2.) $3^5 =$

3.) $6^6 =$

*challenge 4.) $x^4 =$

Write each in *exponential form*.

Example: $3 \cdot 3 \cdot 3 \cdot 3 = 3^4$

5.) $7 \cdot 7 \cdot 7 =$

6.) $3 \cdot 3 \cdot 8 \cdot 8 \cdot 8 \cdot 8 =$

*challenge 7.) $x \cdot x \cdot y \cdot y \cdot y \cdot y \cdot y =$

8.) $9 \cdot 9 \cdot 9 \cdot 9 =$

Evaluate. Show your work.

Example: $2^3 = 2 \cdot 2 \cdot 2 = 8$

9.) $5^3 =$

10.) $3^4 =$

11.) $6^3 =$

12.) $9^2 =$

13.) $13^2 =$

*challenge 14.) $4^2 \cdot 3^3 =$

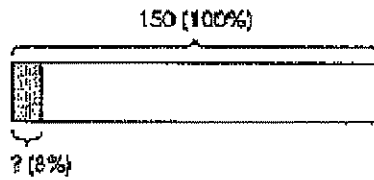
Week 4:

Percent of a Quantity: Solve each problem. Show your work!

Example

What is 8% of 150?

Method 1



The model shows that:

$$100\% \rightarrow 150$$

$$1\% \rightarrow \frac{150}{100} = 1.5$$

$$8\% \rightarrow 8 \times 1.5 = 12$$

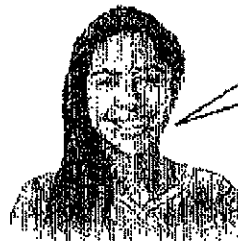
$$8\% \text{ of } 150 \text{ is } \underline{12}$$

Method 2

$$8\% \text{ of } 150 = \frac{8}{100} \times 150$$

$$= \underline{12}$$

$$8\% \text{ of } 150 \text{ is } \underline{12}$$



"of" means "x". In this case, 8% of 150 is the same as 8% x 150.

1.) 35% of 900

Method 1

2.) 115% of \$360

Method 1

3.) 82% of 450

Method 2

4.) 170% of 2,100 ft

Method 2

Choose the method you like best to complete the following problems.

5.) 35% of 125 miles

6.) 46% of 340 gallons

7.) 65% of 180 pounds

8.) 75% of 72 hours

9.) 120% of \$590

10.) 245% of 860 kilograms

Week 5:

Percent of a Quantity - Continued: Solve each problem. Show your work!

Example

15% of a number is 180. Find the number.

$$15\% \rightarrow 180$$

$$1\% \rightarrow \frac{180}{15}$$

$$100\% \rightarrow \frac{100 \times 180}{15} = 1,200$$

The number is 1,200

1.) 40% of a number is 180.

Find the number.

$$40\% \rightarrow 180$$

$$1\% \rightarrow \underline{\hspace{2cm}}$$

$$100\% \rightarrow \underline{\hspace{4cm}}$$

The number is

2.) 75% of a number is 230.

Find the number.

$$75\% \rightarrow 230$$

$$1\% \rightarrow \underline{\hspace{2cm}}$$

$$100\% \rightarrow \underline{\hspace{4cm}}$$

The number is

3.) 25% of is 195.

4.) 56% of is 70.

5.) 18% of is 99.

6.) 92% of is 345.

7.) 55% of is 143.

8.) 350% of is 679.

9.) 47% of is 141.

10.) 125% of is 85.

Week 6:

One-Step Equations: Solve. Show your work! Box your answer.

1.) $x - 8 = 15$

2.) $x + 15 = 6$

3.) $5x = 6$

4.) $\frac{x}{8} = 6$

5.) $x - 8 = 12$

6.) $6 + x = 15$

7.) $1.3x = 2.6$

8.) $\frac{x}{9} = 12$

9.) $\frac{2}{3}x = 18$

10.) $\frac{5}{6}x = 10$

Student Survey- We would like to take the opportunity to gather some information about you as soon as possible. Please complete the survey below:

1. What was your favorite topic in 6th grade math? Why?
What was your least favorite topic in 6th grade math? Why?

2. What are your strengths as a math student?
What are your weaknesses as a math student?

3. List at least 3 goals you have for 7th grade math. Explain how you plan to achieve those goals.

4. In reflection, how well do you feel you completed this packet? Explain how long it took you to complete, (what were your work habits; did you complete it in one sitting, broken up over the course of a few weeks or days, did you wait until the last minute?) How much effort did you put into this packet? Explain. If you could grade yourself according to the rubric (found on page 9), what would it be?

Summer Homework Grading Rubric

Category	4	3	2	1
Accuracy <i>*This category is worth twice as much as all other categories</i>	33-35 problems correct	27-32 problems correct	22-26 problems correct	Below 22 problems correct
Organization/Neatness	Work is presented in a legible manner, the reader can follow the mathematical process and thinking	Work is presented in a legible manner, the reader can follow MOST of the steps toward the solution	Work is presented in an unclear manner, it is difficult for the reader to follow the steps toward solution	Work is presented in an unclear manner. The reader cannot determine the sequence of steps
Mathematical reasoning	Students shows and explains ALL work by justifying the strategy, solution and/or answer to the problem using mathematical language or demonstrating thinking	Student shows and explains MOST of the work through justifying the strategy, conclusion and/or answer, but leaves out details	Student shows and explains with minimal work and attempts to justify the strategy, conclusion and/or solution but the justification is not complete	Student shows now justification
Reflection	All 4 questions are answered in complete sentences and demonstrate thoughtful reflection.	3 questions are answered in complete sentences and demonstrate thoughtful reflections	2 questions are answered in complete sentences and demonstrate thoughtful reflection. All 4 questions are answered but demonstrate little effort and thoughtfulness.	Only one question is answered in complete sentences and demonstrates thoughtful reflection.

Total Score: _____

Teacher's comments:
