ST. GREGORY THE GREAT CATHOLIC SCHOOL
SUMMER 2022
READING AND MATH ENRICHMENT

Students Entering Seventh Grade August 2022

Dear St. Gregory Parents,

Happy summer! While you are enjoying your summer, please encourage your child to read as much as possible. Reading is one of the most important skills which can impact your child's academic success and confidence!

The following pages have information regarding the math and reading activities our seventh grade teachers would like your child to complete during the summer. Please send the completed activities with your child on the second day of school.

Seventh Grade Summer Reading

- Incoming Seventh grade students will read *Percy Jackson & the Olympians: The Lightning Thief* by Rick Riordan.
- Follow the directions and complete the assignment given.
- Please plan accordingly when reading because you will be required to take an AR quiz on this novel, during the first week of school, which will count towards your first quarter goal. The teacher will go over the novel during the first week of school and quizzes will not be deleted.
- In addition to the mandatory book, students will read at least two more books of their choosing. At least one of the books needs to be nonfiction.

Seventh Grade Math Readiness

- Included in this packet is a math readiness packet. Please print the packet and complete all pages. All work and steps are to be shown for each problem or the packet will be considered incomplete.
- The packet will be due to your child's teacher on the second day of school.
- The packet has been paced for you so that students have a break during the summer yet also review skills that they learned during sixth grade and are ready to learn new skills during the new school year.

  o Week of July 11 - Addition and Subtraction of Fractions and Mixed Numbers
  o Week of July 18 - Multiplication and Division of Fractions and Mixed Numbers
  o Week of July 25 - Operations with Decimals o Week of July 26 – Geometry
  o Week of August 1 - Solving One-Step Equations

Incoming 7ᵗʰ Grade Summer Reading

Incoming 7th graders are required to read one (1) novel and are encouraged to read more.

Mandatory: *Percy Jackson & the Olympians: The Lightning Thief* by Rick Riordan

(ISBN-13: 978-0786838653)

Please complete the story reflection for *Percy Jackson & the Olympians: The Lightning Thief* and turn into Ms. Howley on Thursday, August 18, 2022.

Students will take an AR test on *Percy Jackson & the Olympians: The Lightning Thief* upon returning to school. Students do not have to take an AR test on the other two novels read. Please note that NO AR quizzes will be deleted. Please be prepared and plan accordingly.

***Percy Jackson & the Olympians: The Lightning Thief* Novel Reflection - You may write (in cursive and blue ink) or type your responses on a google document.**

Novel: *Percy Jackson & the Olympians: The Lightning Thief*   Author: Rick Riodan

1. Who was your favorite main character in this story? What are the actions and personality traits of the character that you found to be most likable or appealing?

2. What is the author's purpose for the story? Use text evidence to support your claim?

3. What is a theme (idea or message) embedded within the story that stands out to you? Quote a passage from the book that sticks to memory and explain why that idea or message impressed you so much.

4. What is the greatest conflict or hardship experienced by your favorite main character? How did their hardship affect your emotions while reading the novel? Did you feel anxiousness, sadness, compassion or empathy for the character? Describe the emotion you experienced during this point of the story and explain why you felt this way.

5. Summarize the climax of the story. How does the climax affect your favorite main character? Does the climax create greater happiness for them? Does it allow him to accomplish his goal(s) within the story? Please explain.

6. If you were your favorite character, what would you have done differently to avoid encountering his/her problem? Think about a decision that this character made at some point in the story which you did not quite agree with. How would you have made this decision differently? Explain why.

I read *Percy Jackson & the Olympians: The Lightning Thief*. I know I will be taking the AR quiz on *Percy Jackson & the Olympians: The Lightning Thief* upon returning to school.

_____   _____

Student Signature   Parent Signature

Addition and Subtraction of Fractions and Mixed Numbers

Adding and Subtracting Fractions:

$$\frac{1}{3} + \frac{1}{6}$$

1) Rewrite the fractions with a common denominator

2) Add or subtract the numerators

3) Simplify the fraction

$$+ \begin{array}{c} \dfrac{1}{3}\dfrac{\times 2}{\times 2} = \dfrac{2}{6} \\[6pt] \dfrac{1}{6}\dfrac{\times 1}{\times 1} = \dfrac{1}{6} \end{array}$$

$$\frac{3+3}{6+3} \boxed{\frac{1}{2}}$$

Adding and Subtracting Mixed Numbers:

$$3\frac{1}{4} - 1\frac{1}{3}$$

1) Rewrite the fractions with a common denominator

2) Rename, if necessary

3) Add or subtract the fractions. Add or subtract the whole numbers

4) Simplify if necessary

$$3\frac{1}{4} = \overset{2}{\cancel{3}}\frac{3}{12} + \frac{12}{12} = 2\frac{15}{12}$$

$$- \quad 1\frac{1}{3} = 1\frac{4}{12} \quad = \quad 1\frac{4}{12}$$

$$\boxed{1\frac{11}{12}}$$

Find the sum. Write your answer in simplest form.

1. $\dfrac{1}{4}+\dfrac{1}{2}$ 2. $\dfrac{2}{5}+\dfrac{1}{3}$ 3. $\dfrac{7}{15}+\dfrac{3}{10}$ 4. $\dfrac{11}{28}+\dfrac{4}{7}$

5. $\dfrac{3}{4}+\dfrac{1}{12}$ 6. $\dfrac{9}{10}+\dfrac{13}{20}$ 7. $4\dfrac{15}{16}+7\dfrac{3}{4}$ 8. $2\dfrac{16}{25}+3\dfrac{18}{20}$

9. $3\dfrac{2}{5}+9\dfrac{1}{10}$ 10. $6\dfrac{1}{42}+4\dfrac{5}{6}$ 11. $18\dfrac{7}{9}+16$ 12. $4\dfrac{7}{8}+\dfrac{1}{3}$

Find the difference. Write your answer in simplest form.

13. $\dfrac{7}{8}-\dfrac{1}{4}$ 14. $\dfrac{13}{15}-\dfrac{1}{3}$ 15. $\dfrac{7}{9}-\dfrac{2}{6}$ 16. $\dfrac{21}{24}-\dfrac{3}{8}$

17. $\dfrac{3}{14}-\dfrac{1}{7}$ 18. $\dfrac{9}{10}-\dfrac{1}{2}$ 19. $9\dfrac{1}{6}-4\dfrac{1}{12}$ 20. $12\dfrac{18}{25}-8\dfrac{4}{5}$

21. $5\dfrac{8}{9}-3\dfrac{2}{3}$ 22. $8\dfrac{12}{16}-7\dfrac{31}{32}$ 23. $10\dfrac{3}{4}-6\dfrac{4}{5}$ 24. $13\dfrac{7}{8}-\dfrac{10}{12}$

Multiplication and Division of Fractions and Mixed Numbers

Multiplying Fractions and Mixed Numbers:

1) Convert mixed numbers to improper fractions

2) Cross simplify if possible

3) Multiply the 2 numerators and then multiply the 2 denominators

4) Simplify if necessary

$$2\frac{1}{4} \cdot \frac{1}{3}$$

$$2\frac{1}{4} = \frac{9}{4}$$

$$\overset{3}{\cancel{9}}{4} \cdot \frac{1}{\underset{1}{\cancel{3}}} = \frac{3}{4}$$

Dividing Fractions and Mixed Numbers:

1) Convert mixed numbers to improper fractions

2) "Same, Change, Flip" (keep first fraction the same, change division to multiplication, flip second fraction to its reciprocal)

3) Cross simplify if possible and then multiply

4) Simplify if necessary

$$\frac{3}{7} \div \frac{9}{10}$$

$$\overset{1}{\cancel{3}}{7} \cdot \frac{10}{\underset{3}{\cancel{9}}} = \frac{10}{21}$$

Find the product. Write your answer in simplest form.

25. $\dfrac{1}{8} \cdot \dfrac{1}{7}$

26. $\dfrac{2}{9} \cdot \dfrac{12}{14}$

27. $\dfrac{7}{12} \cdot \dfrac{8}{14}$

28. $\dfrac{9}{24} \cdot \dfrac{16}{81}$

29. $\dfrac{3}{14} \cdot \dfrac{21}{33}$

30. $\dfrac{1}{2} \cdot \dfrac{9}{13}$

31. $2\dfrac{1}{6} \cdot \dfrac{3}{5}$

32. $8\dfrac{4}{5} \cdot 1\dfrac{5}{11}$

33. $2\dfrac{1}{2} \cdot \dfrac{2}{5}$

34. $9\dfrac{2}{3} \cdot 6$

35. $13\dfrac{1}{3} \cdot 2\dfrac{1}{10}$

36. $7 \cdot \dfrac{1}{3}$

Find the quotient. Write your answer in simplest form.

37. $\dfrac{5}{6} \div \dfrac{1}{4}$

38. $\dfrac{1}{2} \div \dfrac{1}{4}$

39. $\dfrac{3}{4} \div \dfrac{9}{12}$

40. $\dfrac{21}{35} \div \dfrac{7}{25}$

41. $\dfrac{6}{7} \div 3$

42. $\dfrac{2}{11} \div \dfrac{1}{33}$

43. $1\dfrac{1}{4} \div 2\dfrac{1}{3}$

44. $5\dfrac{3}{6} \div 3$

45. $10\dfrac{1}{4} \div \dfrac{2}{5}$

46. $3\dfrac{2}{3} \div 1\dfrac{1}{7}$

47. $4\dfrac{3}{8} \div \dfrac{9}{10}$

48. $8 \div \dfrac{3}{4}$

Operations with Decimals

Adding and Subtracting Decimals:

$5.2 + 10.03$

1) Line up decimal points
2) Bring the decimal down
3) Add or subtract as if numbers are whole numbers

$$+ \begin{array}{r} 5.2 \\ 10.03 \end{array}$$

15.23

Multiplying Decimals:

1.03×2.8

1) Ignore the decimal points
2) Multiply as if numbers are whole numbers
3) Count the number of decimal places in the problem and move the decimal point in answer that many places

$$\times \begin{array}{r} 1.03 \\ 2.8 \\ \hline 824 \\ 2060 \end{array}$$

2.884

Dividing Decimals:

$6.4 \div 1.2$

1) If there is a decimal in the divisor, move it to the end of the number and move the decimal in the dividend the same number of places
2) Bring decimal point in dividend straight up.
3) Divide. Add zeros to dividend and bring down if necessary.

$$1.2 \overline{)6.4,0} \quad 5.\overline{3}$$

$$\begin{array}{r} 60 \downarrow \\ 4\ 0 \\ 3\ 6 \\ \hline 4 \end{array}$$

Find the sum or difference.

49. $6.2 + 3.4$

50. $8.04 - 6.8$

51. $12.4 + 0.899$

52. $12.9 - 2.043$

53. $163.29 + 13.987$

54. $13 - 6.7$

55. $3.91 + 1.93$

56. $34.2 - 29.027$

Find the product.

57. 9.2×3.1

58. $(14.1)(2.7)$

59. 91×4.5

60. $(82.04)(1.2)$

61. $(1.1)(6.78)$

62. 45×0.1

63. 0.010×13.9

64. $(2.34)(5.6)$

Find the quotient.

65. $2\overline{)8.4}$

66. $13\overline{)1.56}$

67. $2\overline{)7.45}$

68. $8\overline{)9}$

69. $3.4\overline{)68}$

70. $0.2\overline{)9.4}$

71. $0.15\overline{)0.045}$

72. $0.3\overline{)4}$

Geometry

Area Formulas: (remember area = the space inside a figure)

Area of Rectangle $= length \times width$

Area of Triangle $= \frac{1}{2} base \times height$

Area of Circle $= \pi \cdot radius^2$

Area of Parallelogram $= base \times height$

Perimeter: (remember perimeter = the distance around a figure)

Perimeter of any polygon: add up all the sides
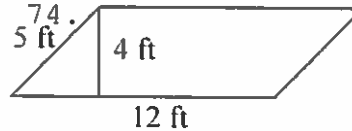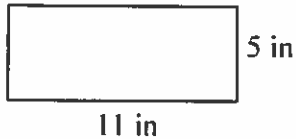
Circumference of Circle $= 2 \cdot \pi \cdot radius$

Volume: (remember volume = the capacity of a 3D figure)

Volume of Rectangular Prism $= length \times width \times height$
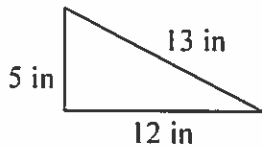$\pi \cdot diameter$

Find the area and perimeter (or circumference). Use 3.14 for pi:

73.

11 in
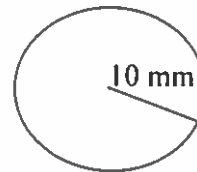5 in

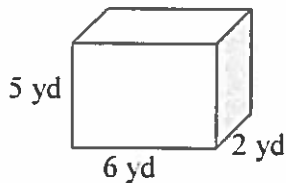74.

5 ft
4 ft
12 ft

75.

5 in
13 in
12 in

76.

10 mm

Find the volume:

77.

5 yd
6 yd
2 yd

Solve the word problem:

78. Danny is installing a fence around his rectangular yard. His yard is 20 feet long by 45 feet wide. If the fencing he picked out costs $25 per foot, how much money will Danny spend on the fence?

79. Tameka wants to put a carpet in her rectangular bedroom. Her room is 22 feet long by 18 feet wide. How much carpeting will Tameka need?

80. Don wants to bring some sand home from his vacation at the beach. He has a box that is 3 inches wide, 4 inches long and 2 inches tall. How much sand can he fit in the box?

Solving One-step Equations

Addition Equations:

Subtract the number on the same side of the equal sign as the variable from each side of the equation

$$x + 3 = 9$$

$$\begin{array}{r} x + \cancel{3} = 9 \\ -3 \quad -3 \\ \hline x = 6 \end{array}$$

Subtraction Equations:

Add the number on the same side of the equal sign as the variable to each side of the equation

$$14 = x - 7$$

$$\begin{array}{r} 14 = x - \cancel{7} \\ +7 \quad +7 \\ \hline 21 = x \end{array}$$

Multiplication Equations:

Divide each side of the equation by the number on the same side of the equal sign as the variable

$$5m = 105$$

$$\frac{\cancel{5}m}{\cancel{5}} = \frac{105}{5}$$

$$m = 21$$

Division Equations:

Multiply each side of the equation by the number on the same side of the equal sign as the variable

$$\frac{y}{13} = 5$$

$$13 \times \frac{y}{\cancel{13}} = 5 \times 13$$

$$y = 65$$

Solve for the given variable:

81. $x + 18 = 32$ 82. $18f = 720$ 83. $h - 56 = 57$ 84. $\dfrac{b}{6} = 12$

85. $12 = r - 76$ 86. $33 + d = 65$ 87. $14m = 42$ 88. $10c = 5$

89. $38 = 19j$ 90. $w + 65 = 100$ 91. $r - 7 = 9$ 92. $x \div 12 = 9$

93. $14 + x = 18$ 94. $\dfrac{p}{22} = 7$ 95. $47 = x - 5$ 96. $k + 16 = 76$

97. $2 = 6m$ 98. $t - 8 = 14$ 99. $\dfrac{h}{19} = 11$ 100. $47 = 18 + b$