St. Dominic Catholic School
7th Grade Summer Math Packet

Dear Incoming 7th Grade Families,

I am excited to have you for math! Please complete this summer math packet before coming back to school in August. You should be able to do everything in the packet - please ask for help if you need it! Math facts may need practice over the summer to be able to do them quickly and correctly when you come back. Please review your work as there will be a quiz the first week of school.

I've included some links to that might help you if you get stuck. You also might want to check out ixl.com which will let you try 20 questions per day. You do not need to buy the full version!

I hope you enjoy your summer break and look forward to seeing you in August!

Sincerely,

Mrs. Herbst

Topics	Khan Academy Link
Ratios, Rates, and Percentages ratios; rates; percents; percent to decimal conversions	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-ratios-prop-topic
Arithmetic Operations adding, subtracting, multiplying and dividing decimals; dividing whole numbers; dividing fractions by fractions; exponents; order of operations	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations
Negative Numbers negative decimals and fractions on the number line; number opposites, comparing negative numbers; absolute value; coordinate plane	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-negative-number-topic
Properties of Numbers whole numbers and integers; least common multiple, greatest common factor	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-factors-and-multiples
Variables and Expressions variables; substitution and evaluating expressions; writing algebraic expressions	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-expressions-and-variables
Equations and Inequalities algebraic equations; one-step equations with adding, subtracting, multiplication, and division; finding mistakes; dependent and independent variables	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equations-and-inequalities
Equivalent Expressions combining like terms; distributive property; equivalent expressions	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-equivalent-exp
Geometry area of a parallelogram, triangle, shapes on grids, trapezoids, and composite figures; volume with fractions; surface area; drawing polygons on a coordinate plane; quadrilaterals on the coordinate plane	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-geometry-topic
Data and Statistics dot plots and frequency tables; statistical questions; histograms; mean, median, mode, range; box-and-whisker plots; interquartile range; mean absolute deviation; comparing data displays; shape of data distributions	https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-data-statistics

Ways to practice/get help:

Your old (or new) math book

Flashcards

Khan Academy - khanacademy.org

IXL - ixl.com

Just Math Tutorials - http://patrickjmt.com

CliffsNotes (for math) - https://www.cliffsnotes.com/study-guides/basic-math/basic-math-and-pre-algebra

Hooda Math Games - http://www.hoodamath.com/games.html

Arcade Academics (Arcademics) - http://www.arcademics.com

You are more than welcome to do your work on another piece of paper - if so please make sure to keep it with this math packet!

FOUNDATIONS

Compare Decimals through Thousandths
Compare using <, >, or =.

1	12.94	_____	12.9	2	14.114	_____	21.20
3	8.972	_____	8.099	4	17.105	_____	17.11
5	22.792	_____	22.77	6	4.513	_____	4.282
7	18.067	_____	18.122	8	8.4	_____	8.39
9	1.029	_____	3.234	10	23.231	_____	1

Multiply 2-Digit Numbers

1	65	2	30	3	42	4	15
	x 74		x 42		x 79		x 81
5	89	6	12	7	83	8	45
	x 40		x 13		x 68		x 76

Multi-Digit Multiplication

1 59 x 23 = _____

2 101 x 47 = _____

3 4,234 x 32 = _____

4 590 x 427 = _____

5 85 x 770 = _____

6 248 x 982 = _____

Multiply Decimals

1 0.6 x 0.1 = _____

2 0.8 x 7 = _____

3 0.43 x 0.8 = _____

4 0.9 x 0.2 = _____

5 3.4 x 6.1 = _____

6 0.75 x 0.5 = _____

Add and Subtract Mixed Numbers with Unlike Denominators

1 $1\frac{1}{8} + 5\frac{2}{3} =$ _____

2 $8\frac{2}{3} - \frac{2}{7} =$ _____

3 $3\frac{5}{9} - 1\frac{2}{6} =$ _____

4 $1\frac{1}{15} + 3\frac{4}{5} =$ _____

5 $9\frac{5}{10} + 5\frac{3}{4} =$ _____

6 $5\frac{2}{3} - 2\frac{1}{4} =$ _____

Multiplying Fractions

1 $\frac{4}{5} \times \frac{2}{6} =$ _____

2 $\frac{3}{7} \times \frac{1}{2} =$ _____

3 $\frac{3}{7} \times \frac{7}{3} =$ _____

4 $\frac{6}{7} \times \frac{6}{7} =$ _____

5 $\frac{1}{8} \times \frac{5}{6} =$ _____

6 $\frac{3}{4} \times \frac{1}{10} =$ _____

7 $\frac{5}{6} \times \frac{1}{4} =$ _____

8 $\frac{2}{3} \times \frac{5}{8} =$ _____

Dividing Unit Fractions by Whole Numbers

1 $\frac{1}{2} \div 5 =$ _____

2 $\frac{1}{6} \div 3 =$ _____

3 $\frac{1}{3} \div 4 =$ _____

4 $\frac{1}{8} \div 2 =$ _____

5 $\frac{1}{4} \div 2 =$ _____

6 $\frac{1}{10} \div 7 =$ _____

Dividing Whole Numbers by Unit Fractions

1 $5 \div \frac{1}{3} =$ _____

2 $2 \div \frac{1}{9} =$ _____

3 $15 \div \frac{1}{3} =$ _____

4 $3 \div \frac{1}{3} =$ _____

5 $4 \div \frac{1}{4} =$ _____

6 $2 \div \frac{1}{5} =$ _____

Evaluating Powers of Ten

1 $10^4 =$ _____

2 $10^3 =$ _____

3 $10^2 =$ _____

4 $10^5 =$ _____

RATIOS, RATES, AND PERCENTAGES

Rate Problems

1 If 4 batteries cost $10.36, how much do 6 batteries cost?

2 If 13 chocolate bars cost $21, how many do 30 cost?

3 If it snows 7 inches of snow in 2 hours, how much snow will be there in 8 hours?

4 If it takes 9 gallons to go 140 miles, how many gallons are needed to go just 80 miles?

Comparing Rates

1 9 cans of green beans at Greers cost $4.12. 7 of the same cans at Winn-Dixie cost $3.89. Which is the better buy? What were the unit rates?

2 Sam ran the 5-kilometer race in 45 minutes. Alex ran the 2-kilometer race in 17 minutes. Which runner ran the faster race? What were the rates per hour?

3 8 apples at Wal-Mart cost $1.45. The same kind of apples are $1.22 for 6 at the gas station. Which place is the better buy? What is the unit rate?

4 7 calculators cost $190 at Best Buy. 10 of the same calculators cost $270 at Office Max. Which is the better buy? What were the unit rates?

Converting Percents and Fractions

Change from a percent to a fraction (in simplest form) or a fraction to a percent.

1 $\frac{24}{25}$ = _____

2 27% = _____

3 46% = _____

4 $\frac{6}{20}$ = _____

5 $\frac{16}{10}$ = _____

6 180% = _____

7 50% = _____

8 $\frac{18}{25}$ = _____

Converting Decimals and Percents

Change from a decimal to a percent or a percent to a decimal.

1 0.2 = _____

2 27% = _____

3 46% = _____

4 0.290 = _____

5 3.2 = _____

6 180% = _____

7 50% = _____

8 0.08 = _____

Finding Percents

1 6% of 24 = _____

2 10% of 48.46 = _____

3 14% of 21 = _____

4 5% of 35 = _____

5 2% of 200 = _____

6 100% of 244 = _____

Arithmetic Operations

Add Decimals

1 1.08 + 1.67 = _____

2 0.195 + 1.6 = _____

3 0.46 + 0.247 = _____

4 4.40 + 0.93 = _____

5 0.329 + 1.42 = _____

6 3.2 + 3.02 = _____

Subtract Decimals

1 2.7 - 0.1 = _____

2 6.5 - 0.3 = _____

3 0.46 - 0.25 = _____

4 4 - 0.93 = _____

5 98.8 - 67.2 = _____

6 3.2 - 3.02 = _____-

Divide by 1-Digit Numbers

1 $6\overline{)2514}$

2 $6\overline{)516}$

3 $4\overline{)244}$

4 $8\overline{)4288}$

5 $5\overline{)980}$

6 $8\overline{)304}$

7 $2\overline{)1548}$

8 $7\overline{)6475}$

Multi-Digit Division

1 $128 \div 16 =$ _____

2 $9{,}815 \div 65 =$ _____

3 $105 \div 21 =$ _____

4 $2{,}250 \div 25 =$ _____

5 $34 \div 17 =$ _____

6 $108 \div 12 =$ _____

Dividing Decimals

Please express your answer as a decimal.

1 $3 \div 5 =$ _____

2 $15 \div 2 =$ _____

3 $51 \div 6 =$ _____

4 $2.3 \div 5 =$ _____

5 $0.48 \div 8 =$ _____

6 $0.8 \div 0.2 =$ _____

7 $0.47 \div 0.1 =$ _____

8 $4.5 \div 0.5 =$ _____

9 $6 \div 0.2 =$ _____

10 $7.5 \div 0.15 =$ _____

Multiply Mixed Numbers

1 $3\frac{2}{3} \times 1\frac{1}{4} =$ _____

2 $\frac{3}{5} \times 2\frac{1}{2} =$ _____

3 $5\frac{4}{7} \times 2\frac{3}{5} =$ _____

4 $9\frac{1}{6} \times 4\frac{3}{4} =$ _____

5 $10\frac{2}{5} \times \frac{1}{3}$ = _____

6 $\frac{2}{7} \times 3\frac{5}{6}$ = _____

Dividing Fractions

1 $\frac{1}{3} \div \frac{3}{5}$ = _____

2 $\frac{1}{2} \div \frac{5}{6}$ = _____

3 $\frac{4}{5} \div \frac{4}{5}$ = _____

4 $\frac{5}{7} \div \frac{8}{9}$ = _____

5 $\frac{7}{3} \div \frac{6}{10}$ = _____

6 $\frac{2}{3} \div \frac{3}{4}$ = _____

Exponents

1 4^2 = _____

2 2^5 = _____

3 6^3 = _____

4 9^2 = _____

Order of Operations

1 $10 + (2 + 5)^2 + 6$ = _____

2 $4 - 2 + 4 \times 8 - 1$ = _____

3 $2^2 - 0(3 + 32)$ = _____

4 $(6^2 + (18 \div 9 + 5^2)) - 3$ = _____

PROPERTIES OF NUMBERS

Least Common Multiple

Find the least common multiple of each pair of numbers.

1 9, 15 _____

2 22, 6 _____

3 18, 3 _____

4 3, 4 _____

5 9, 21 _____ 6 4, 8 _____

Greatest Common Factor

Find the greatest common factor for each number pair.

1 20, 15 _____ 2 6, 2 _____

3 4, 30 _____ 4 15, 8 _____

5 2, 8 _____ 6 8, 24 _____

15 - 7	16 - 8	5 + 6	64 ÷ 8	6 + 7	42 ÷ 6	12 ÷ 2	14 - 9
9 ÷ 3	1 × 1	16 - 8	3 × 8	7 ÷ 1	7 × 8	11 - 6	1 + 1
9 - 6	5 + 9	15 ÷ 3	9 + 4	9 ÷ 3	7 - 3	16 ÷ 4	6 × 2
7 + 7	6 + 4	9 + 1	8 + 1	5 + 7	8 + 6	28 ÷ 7	9 × 2
6 ÷ 6	6 × 6	3 + 9	7 + 6	6 × 2	16 - 9	5 - 4	6 × 9