Going into Grade 6 Math Honors Summer Study

For students to reinforce foundational computational skills, students enrolled in Grade 6 Math Honors are strongly encouraged to preserve their mastery of 5th Grade Math concepts and skills over the summer. Students will be assessed on the following math concepts and skills during the first week of school in August. This assessment is diagnostic and will not be graded.

Each of the following student learning targets (TEKS) provide a few examples for practice. Answers to the sample exercises are provided on the last page. Please use a separate sheet of paper to write your math work and solutions.

Imagine Math can be used to help students along with two free online resources are available for additional support (Khan Academy: https://www.khanacademy.org/ and IXL Math: https://www.ixl.com/math/grade-5).

TEKS: 5.3B Multiply with fluency a three-digit number by a two-digit number using the standard algorithm.

Ex 1: 340×89	Ex 2: 439×22	Ex 3: 64×475

Khan Academy: https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic

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TEKS: 5.3C solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm.

If a remainder exists, use "R" followed by the remainder in your answer format.

Ex 4: $2{,}478 \div 58$	Ex 5: $6{,}329 \div 87$	Ex 6: $7{,}311 \div 12$

Khan Academy: https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-mult-div-topic

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TEKS: 5.3G Solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm.

Ex 7: $83.2 \div 26$	Ex 8: $90.54 \div 18$	Ex 9: $247.5 \div 50$

Khan Academy: https://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-arith-operations

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TEKS: 5.3K Add and subtract positive rational numbers fluently.

Decimals	Proper Fractions
Ex 10: $32 - 23.07$	Ex 13: $\frac{13}{15} - \frac{1}{3}$
Ex 11: $219.501 + 27.2$	Ex 14: $\frac{7}{16} + \frac{3}{8}$
Ex 12: $18.06 + 9.798 - 8.3$	Ex 15: $\left(\frac{5}{8} + \frac{1}{12}\right) - \frac{1}{2}$
Mixed Numbers	**Rational Numbers (Decimals & Fractions)**
Ex 16: $9\frac{1}{3} - 4\frac{1}{6}$	Ex 19: $\frac{1}{2} + 0.5$
Ex 17: $12\frac{1}{4} - 9\frac{3}{5}$	Ex 20: $5\frac{1}{5} - 0.20$
Ex 18: $\left(2\frac{5}{8} + 2\frac{1}{2}\right) - 4\frac{2}{3}$	Ex 21: $2.25 + \left(3\frac{5}{12} - \frac{1}{3}\right)$

Khan Academy: https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fractions-topic and
https://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-fractions-topic

TEKS: 5.3L Divide whole numbers by unit fractions and unit fractions by whole numbers.	
Divide whole number by unit fraction Ex 22: 5 ÷ ½ Ex 23: 6 ÷ 1/3 Ex 24: 8 ÷ ¼ Ex 25: A regular polygon has a perimeter of 2 ft. If each side measures 1/3 ft, what is the name of the polygon?	Divide unit fraction by whole number Ex 26: ½ ÷ 5 Ex 27: 1/3 ÷ 6 Ex 28: ¼ ÷ 8 Ex 29: Ms. Allen has 1/8 of a pan of brownies left to divide between 2 children. What fraction of the original pan of brownies does each child get?
Khan Academy: https://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-fractions-topic	

TEKS: 5.4A Identify prime and composite numbers.
A prime number has only two factors, itself and one.   Which of the following are prime numbers? <u>Justify.</u> Ex 30: 21   Ex 31: 13   Ex 32: 17   Ex 33: 108
Khan Academy: https://www.khanacademy.org/math/cc-fourth-grade-math/cc-4th-fact-mult-topic/cc-4th-prime-composite/v/prime-numbers IXL Math: http://www.ixl.com/math/grade-5/prime-and-composite- numbers

TEKS: 5.4F Simplify numerical expressions that <u>do not involve exponents</u>, including up to two levels of grouping.	
Ex 34: 8 × (3 + 4) ÷ 2	Ex 37: 12 ÷ 6 + 10 × 2
Ex 35: 5 ÷ 5 + 4 × 11	Ex 38: 22 + (96 − 40) ÷ 8
Ex 36: [6 − (3 × 2)] + 4	Ex 39: [52 + (48 ÷ 8)] − 17
Khan Academy: https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-factors-and- multiples	

Answer Key		
Ex 1: 30,260 Ex 2: 9,658 Ex 3: 30,400	Ex 4: 42 R42 Ex 5: 72 R65 Ex 6: 609 R3	Ex 7: 3.2 Ex 8: 5.03 Ex 9: 4.95

Decimals E 10: 8.93 Ex 11: 246.701 Ex 12: 19.558	Proper Fractions Ex 13: $\frac{8}{15}$ Ex 14: $\frac{13}{16}$ Ex 15: $\frac{5}{24}$
Mixed Numbers Ex 16: $5\frac{1}{6}$ Ex 17: $2\frac{13}{20}$ Ex 18: $\frac{11}{24}$	Rational Numbers (decimals & fractions) Ex 19: 1 Ex: 20: 5 Ex 21: $5\frac{1}{3}$
Divide whole number by unit fraction Ex 22: 10 Ex 23: 18 Ex 24: 32 Ex 25: 2 ft ÷ 1/3 ft, = 6, hexagon	Divide unit fraction by whole number Ex 26: 1/10 Ex 27: 1/18 Ex 28: 1/32 Ex 29: 1/8 ÷ 2 = 1/16
Ex 30: 21 = 3 × 7; composite number Ex 31: 13 = 13 × 1 only factors; prime number	Ex 32: 17 = 17 × 1 only factors; prime number Ex 33: 108 = 2 × 54; composite number
Ex 34: 28 Ex 35: 45 Ex 36: 4	Ex 37: 22 Ex 38: 29 Ex 39: 41