

## 6<sup>th</sup> Grade Math Essential Skills List

Skill	Computation Sample	Constructive Response Sample	Thinking	Resources & How To Videos
Adding multi-digit numbers. <b>4.NBT.4</b> Click the link below for more information on the standard above.	Compute: $34 + 250 + 68 =$ a) 284 b) 318 c) 352 d) 658	<p>Paul, Jason, and Tyson plan to put their money together to purchase a rocket for their science fair project. Paul has \$45, Jason has \$125 and Tyson has \$85. How much does Paul, Jason, and Tyson have together?</p> <p>Will Paul, Jason and Tyson have enough money to purchase a rocket that cost \$250?</p>	In order to add or subtract multi digit numbers you have to line up the numbers according to place value. You must perform the operation asked, keeping in mind we have to regroup when necessary.	<a href="https://www.youtube.com/watch?v=OaTIgGp5zmo">https://www.youtube.com/watch?v=OaTIgGp5zmo</a>
<b>Multiply multi-digit numbers Standard:</b> <b>5.NBT.5 -&gt;</b> <b>6.NS.3</b>	Find the Product $123 \times 34 =$ a) 861 b) 3690 c) 4080 d) 4182	<p>There will be 45 adults going to a museum. There will be twice as many students as adults. Adult tickets cost \$25 each. Student tickets cost \$12 each.</p>	In order to multiply multi-digit numbers. You must have an understanding of the basic times tables. Multiplying following the standard algorithm	<a href="https://www.youtube.com/watch?v=RVYwunbpMHA">https://www.youtube.com/watch?v=RVYwunbpMHA</a>

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<p><b>Dividing multi-digit numbers</b></p> <p><b>Standard:</b> <b>5.NBT.6-&gt;6.NS.2</b></p>	<p>Hassan’s soccer team is trying to raise \$688 to travel to a tournament in Florida so they decided to host a pancake breakfast. Each person must pay \$43 for breakfast. How many people need to attend the breakfast?</p>	<p>In order to raise \$688 to travel to the tournament, 16 people need to attend breakfast.</p>	<p>Explain the difference between partitive (how large are the groups?) and measurement (how many groups?) division.</p> <p>Relate division of multi-digit numbers to multiplication of those numbers.</p> <p>Represent division of multi-digit whole numbers with base ten models (equal groups) and arrays/area models. (Models can be helpful, so that you can visually see what is happening. Click resources for more information.)</p>	<p><a href="https://www.youtube.com/watch?v=gA4Zv3xTWKM">h ttps://www.youtub e.com/watch?v=gA4Zv 3xTWKM" \h ttps://www.voutube.</a></p> <p><a href="https://hcpss.instruction.com/courses/108/paging/5-dot-nbt-dot-6-about-the-math-terminology">h ttps://hcpss.instruct ure.com/courses/10 8/pa g es/5-dot-nbt-dot-6- about-the-math- terminology</a></p>
<p><b>Reducing Fractions Standard 5.NS.A</b></p>	<p>Which of the following is <math>\frac{12}{24}</math> reduced to the lowest term?</p> <p>a) <math>\frac{12}{24}</math> b) <math>\frac{1}{1}</math> c) <math>\frac{3}{6}</math> d) <math>\frac{1}{2}</math></p>	<p>Reduce the following fraction to the lowest term <math>\frac{6}{10}</math>. Create a diagram with both <math>\frac{6}{10}</math> and it’s lowest term proving that both fractions are equivalent.</p>	<p>When reducing fractions you want to first find the greatest common factor of the numerator and denominator. Once you find the greatest common factor you can then divide the numerator and denominator by the g.c.f. to get your fraction simplified to the lowest term.</p>	<p><a href="https://youtu.be/1uSI0nNZr80">h ttps://youtu.be/1uSI0 nNZr80</a></p> <p><a href="https://youtu.be/WPimvsp10_c">h ttps://youtu.be/WPim vsp10_c</a></p> <p><a href="https://learnzillion.com/resources/31">h ttps://learnzillion. com/resources/31</a></p>

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<p><b>Convert mixed numbers to improper fractions</b> Standard: 5.NF.A.1</p>	<p>Which of the following is converted to an improper fraction?</p> <p style="text-align: center;"><math>3\frac{1}{2}</math></p> <p>a) <math>\frac{5}{2}</math> b) <math>\frac{6}{2}</math> c) <math>\frac{2}{7}</math> d) <math>\frac{2}{9}</math></p>	<p>Three scholars wrote mixed numbers on the smartboard.</p> <p>Jason wrote <math>2\frac{1}{7}</math></p> <p>Paul wrote <math>3\frac{2}{7}</math></p> <p>Henry wrote <math>3\frac{1}{2}</math></p> <p>Which scholar's mixed number is equivalent to <math>\frac{15}{7}</math></p>	<p>Converting mixed numbers to improper fractions. Multiply the denominator to the whole number first. Then add the product to the numerator. The denominator stays the same. Numerator top part of the fraction. Denominator bottom part of the fraction. Whole number is a number without (beside) fractions; an integer.</p>	<p><a href="https://www.youtube.com/watch?v=TrutPJf9GmQ">https://www.youtube.com/watch?v=TrutPJf9GmQ</a></p>
<p><b>Multiplying Fractions</b> Standard: 5.NF.B.3 -&gt; 6.RP.2</p>	<p>Compute <math>\frac{3}{5} \times \frac{1}{4} =</math></p> <p>a) <math>\frac{3}{15}</math> b) <math>\frac{4}{9}</math> c) <math>\frac{3}{9}</math> d) <math>\frac{3}{20}</math></p>	<p>Olivia took out 8 glasses and poured juice from the pitcher. The capacity of each glass is <math>\frac{3}{10}</math> liter. If there was enough juice for 6 glasses, how much juice was there?</p>	<p>When multiplying fractions, first convert any mixed numbers or whole numbers into improper fractions. Multiply the numerators across. Then multiply the denominators across. Simplify if necessary.</p>	<p><a href="https://www.youtube.com/watch?v=qmfXyR7Z6Lk">https://www.youtube.com/watch?v=qmfXyR7Z6Lk</a></p> <p><a href="https://www.youtube.com/watch?v=CcDGRLosAf0">https://www.youtube.com/watch?v=CcDGRLosAf0</a></p>

<p><b>Dividing Fractions</b>  <b>Standard: 5.NF.B.3/5.NF.7 -&gt;6.RP.2/6.NS.1</b></p>	<p>There are 3 hoagies and they are shared by 4 people. How can I represent this as a fraction?</p> <p>a) <math>\frac{1}{3}</math>  b) <math>\frac{2}{4}</math>  c) <math>\frac{3}{4}</math>  d) <math>\frac{4}{3}</math>  <math>\frac{3}{10}</math></p> <p>Compute</p> $\frac{2}{5} \div \frac{1}{2} =$ <p>a) <math>\frac{2}{10}</math>  b) <math>\frac{2}{3}</math>  c) <math>\frac{4}{5}</math>  d) <math>\frac{4}{10}</math></p>	<p>Multiple Choice: Carol has <math>1\frac{5}{8}</math> cups of yogurt to make smoothies. Each smoothie uses <math>\frac{1}{3}</math> cup of yogurt. What is the maximum number of smoothies that Carol can make with that yogurt?</p> <p>a. 1  b. 4  c. 5  d. 7</p>	<p>When dividing fractions you must first convert mixed numbers and whole numbers into improper fractions if necessary. After doing that you perform KCF (Keep, Change, Flip). The first fraction is kept the same, the division sign is changed into a multiplication sign and the third fraction is flipped (this is also known as the reciprocal). Lastly, you multiply across normally as you would, simplifying the product if necessary.</p>	<p><a href="https://www.youtube.com/watch?v=q4vE14mk8g0">https://www.youtube.com/watch?v=q4vE14mk8g0</a></p> <p><a href="https://www.youtube.com/watch?v=nMZJKGyu-Kk">https://www.youtube.com/watch?v=nMZJKGyu-Kk</a></p>
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<p><b>Order of Operations</b>  <b>5.OA.A.1 -&gt; 6.EE.2</b></p>	<p>Evaluate the following expression.</p> $20 - 5 \times 2 + 2$ <p>(a) 32  (b) 0  (c) 12  (d) 8</p>	<p>Evaluate the following expression.</p> $3(5 + 2) - 2^2$	<p>When evaluating an expression we always have to follow the proper order of operations. I use the acronym PEMDAS to help me remember the order in which to operate. I know that P represents parenthesis, E exponents, M multiplication, D Division, A Addition &amp; S Subtraction. I also have to keep in mind that if I have both addition and subtraction in the same expression I need to work from left to right and the same goes for if I have both multiplication and division.</p>	<p><a href="https://www.youtube.com/watch?v=OdFXImly_2_-l">https://www.youtube.com/watch?v=OdFXImly_2_-l</a></p> <p><a href="https://www.youtube.com/watch?v=-xpW5Yg_B_giY">https://www.youtube.com/watch?v=-xpW5Yg_B_giY</a></p> <p><a href="https://www.youtube.com/watch?v=ZzeDWFh_Y_v3E">https://www.youtube.com/watch?v=ZzeDWFh_Y_v3E</a></p>
<p><b>Converting fractions into decimals</b></p>	<p>What number is equivalent to <math>\frac{42}{12}</math>?</p> <p>a) 3.2</p>	<p>Write a statement that describes the decimal equivalent to <math>\frac{7}{8}</math>? Be sure to include whether or not it</p>	<p>Calculator- When using your calculator you will take your numerator and divide it by your denominator. For example <math>\frac{42}{12}</math>.</p>	<p><a href="https://www.youtube.com/watch?v=mtX8mhHtqrc">https://www.youtube.com/watch?v=mtX8mhHtqrc</a></p>

	<p>b) 3.5 c) 3.6 d) 3.9</p>	<p>is a terminating decimal or repeating decimal.</p>	<p>I would first put my numerator 42 then hit my division symbol and lastly hit the number 12. This is 42 divided by 12. You will find your response. Same goes for taking your numerator 7, hit the division symbol and then the number 8.</p>	<p><a href="https://www.youtube.com/watch?v=WV5VY76Pf5U">https://www.youtube.com/watch?v=WV5VY76Pf5U</a></p> <p><a href="https://www.youtube.com/watch?v=BDhSG7Lsfug">https://www.youtube.com/watch?v=BDhSG7Lsfug</a></p>
<p><b>Area of Quadrilateral</b> <b>5.G.A.2-&gt; 6.NS.8</b></p>	<p>What is the area of a rectangle with the length of 5cm and width of 2cm?</p> <p>Area = Length x Width</p> <p>a) <math>7cm^2</math> b) <math>9cm^2</math> c) <math>10cm^2</math> d) <math>12cm^2</math></p>	<p>A small square is located inside a bigger square. The length of one side of the small square is 3 inches and the length of one side of the big square is 7 inches</p> <p>What is the area of the region located outside the small square, but inside the big square? Hint: Draw a diagram.</p>	<p>When finding the area identify the length and width.</p> <p>What shape are you working with?</p> <p>Draw a diagram.</p>	<p><a href="https://www.youtube.com/watch?v=xCdxURX">https://www.youtube.com/watch?v=xCdxURX</a></p> <p>HYPERLINK "https://www.khanacademy.org/math/geometry/hs"</p>