# Mathematics | Grade 5

I G ade 5, c a e d f c ee c ca a ea : (1) de e g e c add a d b ac f f ac , a d de e g de a d g f e ca f f ac a d f d f f ac ed ca e ( f ac d ded b e be a d e be d ded b f ac ); (2) e e d g d 2-d g d , eg a g dec a f ac e ace a e e a d de e g de a d g f a dec a d ed , a d de e g e c e be a d dec a a ; a d (3) de e g de a d g f e.

(1) S de a e de a d g f f ac a d f ac de e e e add a d b ac f f ac e de a a e a e ca c a e de a . T e de e e c ca c a g a d d ffe e ce f f ac , a d a e ea ab e e a e f e . S de a e e ea g f f ac , f ca a d d , a d e e a be ee ca a d d de a d a d e a e ced e f g a d d d g f ac a e e e. (N e: ed e ca e

## Operations and Algebraic Thinking 5.OA

### Write and interpret numerical expressions.

1. U e e e e , b ac e , b ace e ca e e , a d e a a e e e e e b .
2. W e e e e a ec d ca c a be , a d e e e ca e e e a a g e . *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 (8 + 7). Recognize that 3 (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*

### Analyze patterns and relationships.

3. Ge e a e e ca e g g e e . Ide f a e e a be ee c e d g e . F de ed c g f c e d g e f e e , a d g a e de ed a c d a e e. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*

## Number and Operations in Base Ten 5.NBT

### Understand the place value system.

1. Rec g e a a -d g be , a d g e ace e e e 10 e a c a e e e ace g a d 1/10 f a e e e e ace ef .
2. E e e be f e f e d c e g a be b e f 10, a d e e e ace e f e dec a e a dec a ed d ded b a e f 10. U e e- be e e de e e f 10.
3. Read, e, a d c e dec a a d .
   - a. Read a d e dec a a d g ba e- e e a , be a e , a d e ded f , e.g., 347.392 = 3 100 + 4 10 + 7 1 + 3 (1/10) + 9 (1/100) + 2 (1/1000).
   - b. C e dec a a d ba ed ea g f e d g eac ace, g >, =, a d < b ec d e e f c .
4. U e ace a e de a d g d dec a a ace.

### Perform operations with multi-digit whole numbers and with decimals to hundredths.

5. F e -d g e be g e a da d a g .
6. F d e- be e f e be f -d g d de d a d -d g d , g a eg e ba ed ace a e, e e f a , a d/ e e a be ee ca a d d . I a e a d e e ca c a b g e a , ec a g a a a , a d/ a ea de .
7. A

## Number and Operations—Fractions 5.NF

### Use equivalent fractions as a strategy to add and subtract fractions.

1. Add a d b ac f ac e de a ( c d g ed be ) b e ac g g e f ac e a e f ac c a a a d ce a e a e d ffe e ce f f ac e de a . *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*

2. S e d b e g add a d b ac f f ac efe g e a e e, c d g ca e f e de a , e.g., b g a f ac de e a e e e e b e . U e be c a f ac a d be e e f f ac e a e e a a d a e e ea ab e e f a e . *M]zmi]fl]M lib[wmTfl]MTbemw]Mbim4vs tbh]M ]]M]M(]MTbemT]]w]MsheM ]]M]M(w]]Mshe]]MsheMMM*

ctS61a2 ••S> M<alText<FEFF0020>>> BDC ( )Tj EMC ( )Tj/S208Acl5 a61a2 b0304 0Spa32•• ®þÿ þþÿ •5€ 0þÿ •*íÂ " ¬®þÿ a d c e c e . *For example, create a story context for (1/3) 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) 4 = 1/12 because (1/12) 4 = 1/3.*

b. I e e d f a e be b a f ac , a d c e c e . *For example, create a story context for 4 (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 (1/5) = 20 because 20 (1/5) = 4.*

c. S e ea d be g d f f ac b - e e be a d d f e be b f ac , e.g., b g a f ac de a d e a e e e e be . *For example, how much chocolate will each*

## Geometry 5.G

### Graph points on the coordinate plane to solve real-world and mathematical problems.

1. U e a f dc a be e , ca ed a e , de e a c d a e e , e e ec f e e ( e g ) a a ged c c de e 0 eac e a d a g e e e ca ed b g a de ed f be , ca ed c d a e . U de a d a e. be d ca e fa a e f e g e d ec f e a , a d e ec d be d ca e fa a e e d ec f e ec d a , e c e a e a e f e a e a d e c d a e c e d (e.g., x-a a d x-c d a e, y-a a d y-c d a e).
2. Re e ea d a d a e a ca be b g a g e. ad a f e c d a e e, a d e e c d a e a e f e c e f e a .

### Classify two-dimensional figures into categories based on their properties.

3. U de a d a a b e be g g a ca eg f - d e a . g e a be g a bca eg e f a ca eg . *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*
4. C a f -d e a . g e a e a c ba ed e .