1. Find the value of the digit 7 in each number.

374 562	57 214
702 345	1 470
89 703	7 245

2. Order each set from least to greatest.

a) 34 205, 34 025, 34 250

b) 78 901, 78 091, 79 001

c) 12 345, 12 354, 12 435

3. Which number is greater in each pair?
Explain how you know.

a) 49 999 or 50 001

b) 305 678 or 305 687

4. Fill in the blanks.

a) 4 000 = _____ hundreds

b) 3 200 = _____ hundreds

c) 45 000 = _____ thousands

5. Write each number in **two different ways**.
a) 3 450 b) 12 300

6. Add 1000 or subtract 100 to from each number to fill out the table below:

Number	+1000	-100
4 235		
8 970		
12 450		
7 099		

7. Which fraction is greater?
Explain how you know.
a) 3/4 or 2/3 b) 5/8 or 1/2

8. Find the equivalent fractions and fill out the table. Hint: Use fraction tiles if you have them!

Fraction	Equivalent
1/2	
3/5	
2/3	

9. Place these fractions on a number line from 0 to 1.
1/4, 1/2, 3/4

10. Which is closest to 1? Use a number line to help explain your thinking.

a) 7/8 or 3/4

b) 0.9 or 0.99

11. Write 3/10 as a decimal

12. Write 0.6 as a fraction

13. Add **0.5** to each number in column 2 and subtract **0.2** from each number in column 3 to complete the table below.

Number	+0.5	-0.2
2.3		
5.7		
1.8		

14. Compare each pair of numbers.
Circle the greater number and explain how you know.
a) 0.5 or 0.45

b) 0.9 or 0.89

15. Round each number to the nearest **1 000**. Explain how you decided whether to round up or down.
a) 4 682

b) 7 349

16. Estimate the sum of **4 982 + 3 121**.
Which is the better estimate?
a) 8 000
b) 9 000
Explain how you know your estimate is reasonable.

17. Without calculating exactly, determine which sum is greater. Explain your thinking.

398 + 205 or 400 + 200

18. Without calculating exactly, decide whether **36 × 5** is closer to **150** or **200**.
Explain how you know.

19. 0.5 > 0.45
Is this statement true or false?
Explain your reasoning.

20. 2/4 = 1/2
Is this statement always true?
Explain how you know.

21. Write a number that is between **3.4 and 3.5**.
Explain how you know your number is between these two values.

22. Write **three different numbers** between **0.6 and 0.7**.
Explain how you know each number fits.

23. What is the value of the digit **7** in the number **3.72**?

24. Circle the greater number. How do you know?
0.6 0.56

25. Create a number between **45 000 and 46 000** that has a **7 in the hundreds place**.
Explain how you know your number meets both conditions.

26. Find **two different ways** to make **10 000** using addition.
Show your thinking.

27. Create two addition expressions that both have a sum close to **6 000**.
Explain how you know which sum is greater.

28. Estimate the sum of **4 982 + 3 121**.
Explain the strategy you used and why your estimate is reasonable.

29. Find **three different fractions** that are equal to **1/2**.
Explain how you know they are equivalent.

30. Which fraction is greater: **5/8 or 3/4**?
Show your thinking using a model, numbers, or words.

31. Write **three different numbers** between **3.4 and 3.5**.
Explain how you know each number fits.

32. A student says: “0.5 is greater than 0.45 because 5 is greater than 45.”
Do you agree or disagree?
Explain your thinking.

33. A student says: “6 × 40 = 2400”
Explain the mistake and show the correct answer.

34. Two students solved **398 + 205** in different ways.
Student A:
398 + 200 = 598
598 + 5 = 603

Student B:
400 + 205 = 605
605 − 2 = 603

a) Explain how each student solved the problem.

b) Which strategy makes more sense to you? Why?

35. Which is greater: **2/3 or 0.6**?
Explain your thinking using a model, numbers, or words.

36. What happens when you multiply a number by **10**?
Give at least two examples and explain your thinking.

37. Which One Doesn't Belong?
Explain your reasoning.

0.5	0.50
1/2	0.45

38. A number is **very close to 50 000**, but it is less than 50 000.
What might the number be?
Explain how you know it is close.

39. Write a number that can be represented as:
3 thousands + 12 hundreds
What is the number? Explain how you know.

40. A student says: “3/6 is greater than 1/2 because 3 is greater than 1.”
Do you agree or disagree?
Explain your thinking.

41. A student says: “0.8 is smaller than 0.75 because 8 is less than 75.”
Do you agree or disagree?
Explain your thinking.

42. Find **two fractions** that are both greater than **1/2** but less than **1**.
Explain how you know.

43. Without calculating exactly, determine which is greater.
Explain how you know.

49 × 6 or 50 × 6

44. Create a number that:
is greater than 3.5
is less than 4
has a 2 in the tenths place
Explain how you know your number fits all conditions.

42. Find **two fractions** that are both greater than **1/2** but less than **1**.
Explain how you know.

43. Without calculating exactly, determine which is greater.
Explain how you know.

49 × 6 or 50 × 6

44. Create a number that:
is greater than 3.5
is less than 4
has a 2 in the tenths place
Explain how you know your number fits all conditions.

45. What happens when you add **0.1** to a number?
Give at least two examples and explain your thinking.

46. Without calculating exactly, decide whether the sum of **3 982 + 2 105** is closer to **6 000** or **7 000**.
Explain how you know.

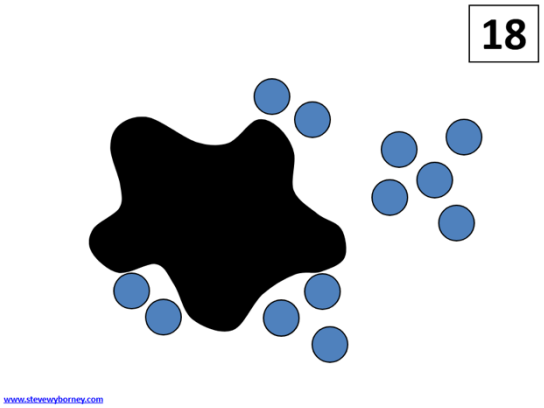
47. You are choosing between two snacks:
Snack A: You eat **3/4**
Snack B: You eat **2/3**
a) Which snack gives you more?
b) How do you know?
c) Show your thinking using a model, numbers, or words.

48. Fill in the blanks to make a true statement:
___ + ___ = about 6 000
a) What numbers did you choose?
b) How do you know your answer is reasonable?
c) Create a different solution.

49. A number:
is greater than **30 000**
is less than **40 000**
has a **5 in the tens place**
a) What might the number be?
b) Explain how you know it meets all conditions.
c) Find a different number that also works.

50. Find:
one **fraction**
one **decimal**
that are both **between 0.5 and 0.75**
a) What are your numbers?
b) Which one is greater?
c) How do you know they both fit between 0.5 and 0.75?

1. Here is a Splat! problem to solve. If there are 18 blue dots altogether, how many are hiding under the splat? Can you write the "fact family" of related equations that connect to this image?



2. Solve using a make-10 strategy (e.g., 7 + 6 = 7 + 3 + 3 = 10 + 3 = 13).

8 + 6	9 + 7
5 + 8	6 + 9

3. Solve using near doubles (e.g., 8 + 9 = 8 + 8 + 1 = 16 + 1 = 17).

6 + 7	8 + 9
5 + 6	9 + 10

4. Solve using think addition (e.g., 18 − 16 because 16 + 2 = 18)

13 – 9	14 – 12
20 – 17	15 - 8

5. Solve using a bridging-10 strategy (13 − 7 = 13 − 3 − 4 = 10 − 4 = 6)

12 - 4	15 – 8
14 – 9	19 - 12

6. Solve using a subtract from 10 strategy (e.g., 14 − 7 = 10 − 7 + 4 = 3 + 4 = 7)

12 – 5	15 – 8
13 – 9	17 - 9

7. Add using friendly numbers:

198 + 7	299 + 86
17 495 + 10 466	39 998 + 629 297

8. Subtract using compensation:

578 – 299	50 000 – 2999
356 000 – 97 000	402 000 - 198 999

9. Use a place value strategy to add or subtract:

1584 + 215	15 704 + 130 260
3 454 – 221	537 998 – 32 455

10. Solve

465 + 3940	37 452 + 539 278
6200 – 4197	703 560 – 25 600

11. Fill in the blank. Show your thinking. How can you check if your answer is correct?

a) 3 299 + ____ = 40 000

b) _____ − 250 000 = 175 000

c) 60 000 = 48 999 + _____

12. Decide which equations are valid. Fix the ones that are not.

a) 800 000 − 299 999 = 799 999 − 299 999 + 1

b) 800 000 − 299 999 = (800 000 + 1) − (299 999 − 1)

c) 800 000 − 299 999 = 799 999 − 299 999 − 1

d) 800 000 − 299 999 = (800 000 − 1) − (299 999 − 1)

13. Which expression gives a result closest to 200 000?

a) 150 467 + 76 068
b) 81 022 + 121 193
c) 237 853 − 48 903
d) 543 190 − 250 902

14. Which is more: 4 − 1.9 or 1.6 + 0.35?
Explain or show your thinking.

15. Order the sums from least to greatest:
11.3 + 4.1, 9.9 + 5.23, 9 + 6.05, 5.3 + 9.7

16. Estimate 3.643 + 4.467 using the strategy indicated.

a) Round each number to the nearest whole number

b) Round each number to the nearest tenth

c) Round each number to the nearest hundredth

d) Front-end round each number

e) Front-end round only one number

Which strategy is closest to the actual sum?

17. Estimate 14.343 − 6.805 using the strategy indicated.

a) Round each number to the nearest whole number

b) Round each number to the nearest tenth

c) Round each number to the nearest hundredth

d) Front-end round each number

e) Front-end round only one number

Which strategy is closest to the actual difference?

18. Draw an area model for each multiplication sentence. Then solve using your model.

4 x 37	86 x 5
6 x 247	16 x 39
43 x 52	609 x 23

19. Fill in the blank to make each equation true.

a) $4 \times 23 = 4 \times \_\_\_ + 4 \times 3$

b) $5 \times 321 = 5 \times 300 + 5 \times \_\_\_ + 5 \times 1$

c) $56 \div 4 = 40 \div 4 + \_\_\_ \div 4$

d) $960 \div 8 = \_\_\_ \div 8 + 160 \div 8$

20 Multiply. Show your strategy. Challenge: Use a variety of strategies.

23 x 6	8 x 401
9 x 247	16 x 45
99 x 38	302 x 15

21. Divide. Show your strategy. Challenge: Use a variety of strategies.

69 ÷ 3	96 ÷ 4
125 ÷ 5	560 ÷ 8
347 ÷ 6	909 ÷ 7

22. Calculate the following. Show your strategies. Challenge: Can you use a different strategy for each question?

48.5 + 21.9	31.2 + 7.998
58.21 - 23.4	8.603 - 2.95
24×37	46×25
348×15	256÷4
247÷13	948÷26

23. Choose three questions:

8+7	28+17	80+70
258+37	488+357	8000+7000

What different strategies can you use to add these numbers?
How can you use one question to help you think about a different question?
How are the numbers related?
Show or record how you figured out the answers using at least two different strategies.

24. Choose three questions:

679+58	236+474	4500+7250
8999+3331	67809+20601	

What different strategies can you use to add these numbers?
Show or record how you figured out the answers using at least two different strategies.

25. Choose three questions:

3×4	4×8	6×8	4×16
8×12	16×12	16×16	

What different strategies can you use to multiply these numbers?
How can you use one question to help you think about a different question?
How are the numbers related?
Show or record how you figured out the answers using at least two different strategies.

26. Choose three questions:

12÷3	18÷6	36÷4	72÷8
80÷10	160÷10	160÷16	

What different strategies can you use to divide these numbers?
How can you use multiplication to think about division?
Show or record how you figured out the answers using at least two different strategies.

27. Choose at least three of these math equations to solve:

59+___=82	230+___=520	___+90=285
92 - ___=65	951- ___=496	948+___=2020

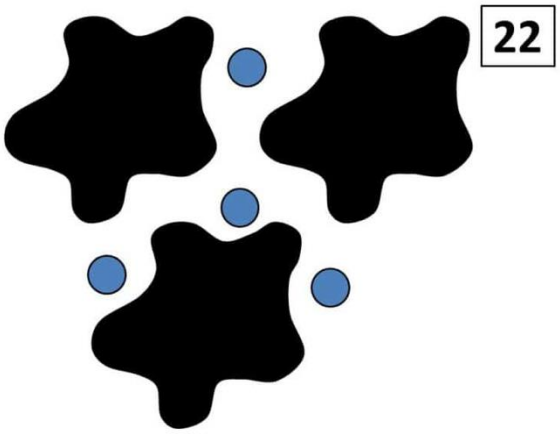
Use items to move around, drawings or mental math strategies.
Could you re-write the equation in a different way to help you think about it?
How does this make you think about how addition and subtraction are related?
How will you record and share your thinking?

28. Choose at least three of these math equations to solve:

3 × ___ = 21	4 × ___ = 44	9 ×___ = 81
15 ×___ = 165	25 × ___ = 500	25 × ___ = 2000

Use items to move around, drawings or mental math strategies.
How does this make you think about how multiplication and division are related?
How will you record and share your thinking?

29. Here is a Splat! problem to solve.
There are 22 blue dots altogether. Each black splat has the same number of blue dots under it. How many blue dots are under each splat?
Share how you solved this with a drawing or a video.
Create your own Splat! problem?



30. Choose three of these math equations to solve:

99 + ___ =175	275 + 850= ___	1000 + ___ =2500
10 × ___ = 360	___ × 20 = 480	250 × ____= 1000

Use mental math strategies such as decomposing or compensating. Think about how addition and subtraction are related and how multiplication and division are related. How will you record and share your thinking?

31. Choose three questions:

3 000 – 1799	5 100 – 625	7 475 – 2 850
50 350 – 6 792	58 000 – 24 658	619 000 – 45 889

Solve each question using at least two different strategies.
How could an open number line show an "adding up" strategy?
Use numbers, symbols and/or words to represent your thinking.

32. Choose an answer: 1.4 or 5.59 or 9.468
Can you think of three different subtraction (removal or find the difference) questions that have this answer. What materials like blocks, or tools like ten-frames, could help you with this task? Record your questions with pictures, numbers or words.

33. Choose three questions:

7.5 – 2.9	6.3 – 4.89	1.75 – 0.97
10.459 – 5.8	49.805–24.999	

Solve each question using at least two different strategies.
How could an open number line show an "adding up" strategy?
Use pictures, numbers, symbols and/or words.

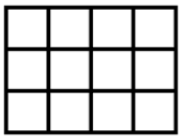
34. Solve each of the equations below.
How does the first question help you solve the other questions?
Show and describe your thinking using pictures, numbers, symbols and words.

3×5=

3×50=

13×50=

35. An array is a rectangle of items in columns and rows.
Here is an array for the multiplication equation 3×4.



Solve at least three of these questions:

2×16 3×18 8×8 12×15 15×21

Draw an array for each equation. What other multiplication questions or smaller arrays can you see within your large arrays? How do these smaller arrays help you to solve the multiplication question for the large arrays?

36. Add or subtract one of the following sets (A or B) of decimal numbers:

A) 4.3 + 2.8 9.2 – 4.7

B) 2.036 – 0. 947 8.999 + 6.038 + 5.256

Show how you solved each question using diagrams, words and numbers. If you used a specific strategy, name the strategy as well.

37. Complete at least three of the following subtraction questions:

4.9 - 2.8	8.2 – 3.9	4.00 – 2.85
9.206 – 0. 899	8.659 - 1.088 - 2.5	

Show how you solved each question using diagrams, words and numbers. If you used a specific strategy, name the strategy as well.

38. Complete at least three of the following addition questions:

2.3 + 2.9	5.5 + 4.7	4.55 + 2.85
4.903 + 0. 747	6.999 + 9.009 + 5.129	

Show how you solved each question using diagrams, words and numbers. If you used a specific strategy, name the strategy as well.

39. Here is a math problem to solve. *What strategies will you use to solve it? You could draw a picture, you could use mental math, decomposing or regrouping, or you could use another strategy. Try more than one strategy and record your strategies and your solution. Share your reasoning to explain your solution.*

Each box of oranges holds 24 oranges. A crate holds 12 boxes of oranges. If a market wanted to have 1000 oranges for a special sale, how many crates of oranges would they need to order? (Note: The market can only order the oranges by whole crates, not partial crates.)

40. Here are some math problems to help us review what we have learning about decimal numbers.

a) What whole numbers could you subtract to help you figure out 4.5 – 2.14?

b) What would you have to add to 3.8 to get to 5.13? How could you write that as an equation?

c) Draw a picture to show why 0.12 < 0.4.

What strategies will you use for each type of question? How does the type of question change which strategy you might use?

Pose your own math problem involving decimal numbers.

41. Let's think flexibly about multiplication. Write out the questions, answer the missing parts.

a) If $3 \times 4 = 12$

then $6 \times 4 =$

and $3 \times 8 =$

b) If $16 \times 12 = 192$

then $8 \times 12 =$

and $4 \times 12 =$

c) If $20 \times 12 = 240$

then $2 \times 12 =$

and $200 \times 12 =$

42. Let's think flexibly about division. Write out the questions, answer the missing parts.

a) If 24 ÷ 8 =3

then 24 ÷ 4=

b) If 15 ÷ 3= 5

then 5 ×___=15

and ___ × 5=15

c) If 250÷10=25

then 10 × ___= 250

and 10 × ___= 500

43. Choose one of the following math questions to inspire a math story problem. Pose your problem using words and numbers and draw a picture or diagram to show how you will solve the problem. Choose an equation that will challenge your thinking.

a) $8 \times 12 =$ ____
b) $92 \div 4 =$ ____
c) $\$2.75 + \$19.78 =$ ____
d) $\$7.62 -$ ____ $= \$4.85$

Extension: Rewrite your story problem to show a different meaning of the operation you chose. Explain what makes it different.

44. Here is a math problem to solve: I opened a package of seeds and planted 6 rows of seeds in the garden. Each row had 24 seeds. I planted some more in a pot. I used up all 170 seeds in the package of seeds. How many seeds did I plant in the pot?
What strategies will you use to answer the problem? Share your thinking.

45. Choose two of the following math questions:

2.8 + 1.7= 7.1 – 2.7= 2.17 + 3.98= 7.43 – 2.85=

What different ways can you figure each question out? How does thinking about strategies with whole numbers help you solve these questions? Record and share at least two different ways for solving these questions.

46. Pick two or more of the relationships below. Use pictures, numbers, words, and specific examples to explain each relationship.

a) Addition and subtraction
b) Multiplication and division
c) Multiplication and addition
d) Division and subtraction

47. The answer is 480. What could the math question be? Think of at least four different questions. Can you think of a question for each operation (addition, subtraction, multiplication and division)?

48. Tell me what you know about 3 × 6 or 18 ÷ 3
Use words, pictures, numbers, symbols, and materials to represent your thinking.
How are the two options related?

49. Describe a situation where you might estimate rather than calculating an exact answer.

50. You have three estimates for 299,899 + 189,999:
a) 300,000 + 200,000
b) 300,000 + 190,000
c) 200,000 + 100,000
Describe the strategy that was used for each estimation. Rank them in order of accuracy to the actual sum. Which strategy do you like best and why?

51. Subtracting numbers like 100 000 - 368 493 is challenging using the traditional stacking method.
What is another way to think about this problem that makes it easier to solve?
Hint: Can we use a friendlier number than 100 000 so that we do not have to regroup?

52. Show two ways to calculate 8 - 3.999. Which way do you prefer and why?

53. Choose one:

a) Describe two different meanings of subtraction.

b) Describe two different meanings of division.

For each meaning, create a story problem related to your life or the community in which you live. How will you share your story problems?

54. Explain how multiplication helps you to divide. Use a specific example to help convey your ideas clearly.

55. Create a "Which one doesn't belong?" using equations. Can you think of a reason why each one does not belong?

56. Create two or more story problems that can be solved by 24×6. Each story problem should demonstrate a different meaning of multiplication. Explain which meaning each problem shows.

57. Create two or more story problems that can be solved by 246 ÷ 4. Each story problem should demonstrate a different meaning of division. Explain which meaning each problem shows.