1. Find the value of the digit 5 in each number:

a) 5 482

b) 3 615

c) 25 904

2. What place is the digit 7 in each number?

a) 7 245

b) 3 478

c) 17 032

3. In which number does the digit 5 have the greatest value?

a) 5 234

b) 2 567

c) 15 432

4. Order each set from least to greatest:

a) 4 205, 4 025, 4 250

b) 18 901, 18 091, 19 001

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

a) 4 999 or 5 001

b) 23 678 or 23 687

6. Fill in the blanks:

a) 3 000 = _____ hundreds

b) 2 400 = _____ hundreds

c) 8 000 = _____ thousands

7. Fill in the blanks:

a) 45 hundreds = _____

b) 6 thousands = _____

c) 120 tens = _____

8. Write the number in standard form:

a) 3 000 + 400 + 50 + 2

b) 6 000 + 20 + 9

9. Write each number in expanded form:

a) 4 582

b) 9 104

10. Complete the statement in two different ways:

4 500 = _____ + _____ OR 4 500 = _____ + _____

11. Complete:

6 342 = 6 000 + _____ + 40 + _____

12. What number is:
5 thousands + 3 hundreds + 7 tens + 2 ones?

13. What digit makes this true?

4 __ 82 is greater than 4 582

14. Which number is closest to 5 000?
a) 4 890
b) 5 120
c) 4 995

15. Round each number to the nearest 1 000:
a) 3 682

b) 7 149

16. Which number rounds to 6 000?
a) 5 499
b) 5 501
c) 6 499

17. Add 1000 or subtract 100 from each number:

Number	+1000	-100
2 345		
5 870		
9 120		

18. Write a number between 3 400 and 3 500.

19. Write three numbers between 8 200 and 8 300.

20. Estimate:
4 282 + 3 121

Which is closer?
a) 7 000
b) 8 000

21. Which is greater?
398 + 205 or 400 + 200

22. 4 500 = 45 hundreds
Is this true or false? Explain.

23. Create a number that:
- is greater than 4 000
- is less than 5 000
- has a 6 in the tens place

24. A number has:

- 3 in the thousands place
- 0 in the hundreds place
- 8 in the tens place
- 5 in the ones place

What is the number?

25. Write a number that is close to 10 000 but less than 10 000.
Explain how you know it is close.

26. Create a number that:
is between 4 000 and 5 000
has a 6 in the tens place

Explain how you know your number meets both conditions.

27. Find two different ways to make 5 000 using addition.
Show your thinking.

28. Create two addition expressions that both have a sum close to 3 000.
Explain how you know which sum is greater.

29. Estimate the sum of $4\,282 + 3\,121$.
Explain the strategy you used and why your estimate is reasonable.

30. Show two different ways to break apart $4\,500$.
Explain how both ways still represent the same number.

31. A student says:
"4 500 is the same as 45 tens."

Do you agree or disagree?
Explain your thinking.

32. Which number is greater: 4 398 or 4 305?
Explain how you know using place value.

33. What number makes this true?

3 245 + _____ = 4 000

Explain how you figured it out.

34. Write three different numbers between 6 400 and 6 500.
Explain how you know each number fits.

35. Which one doesn't belong?
a) 4 500 b) 4 050 c) 4 005 d) 4 555

Explain your reasoning.

36. A number is very close to 10 000, but it is less than 10 000.
What might the number be?
Explain how you know it is close.

37. Write a number that can be represented as:
3 thousands + 14 hundreds

What is the number?
Explain how you know.

38. 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?

39. What happens when you add 1 000 to a number?
Give at least two examples and explain your thinking.

40. Without calculating exactly, determine which is greater:
49 × 6 or 50 × 6

Explain how you know.

41. Create a number that:

- is greater than 2 500
- is less than 3 500
- has a 2 in the hundreds place

Explain how you know your number fits all conditions

42. Which fraction is greater: 3/4 or 2/4?
Show your thinking using a model, numbers, or words.

43. Find two different fractions that are equal to 1/2.
Explain how you know they are equivalent.

44. A student says:
"3/6 is greater than 1/2 because 3 is greater than 1."

Do you agree or disagree?
Explain your thinking.

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

46. Show a model (drawing, number line, or objects) to prove that 2/4 = 1/2.
Explain your thinking.

47. Without calculating exactly, decide whether
3 982 + 2 105 is closer to 6 000 or 7 000.
Explain how you know.

48. A school is collecting books for a fundraiser.
They have collected 3 982 books so far and receive 2 105 more.

About how many books do they have now?
Is the total closer to 6 000 or 7 000?

Explain how you know.

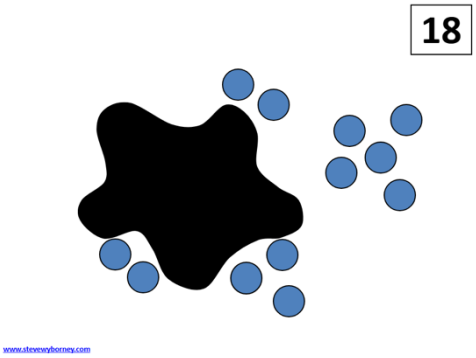
49. A warehouse has 4 275 boxes.
A shipment arrives with 1 850 more boxes.

About how many boxes are there now?
Explain how you estimated your answer.

50. A store had 5 000 stickers.
They sold 1 975 stickers.

About how many stickers are left?
Explain your thinking.

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?



Bonus: Make up your own Splat! problem and show how to solve it.

2. Let's review some addition and subtraction fact strategies.
a) Solve using a make-10 strategy (e.g., 7 + 6 = 7 + 3 + 3 = 10 + 3 = 13).

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

2. Let's review some addition and subtraction fact strategies.
b) Solve using near doubles (e.g., 8 + 9 = 8 + 8 + 1 = 16 + 1 = 17).

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

2. Let's review some addition and subtraction fact strategies.
c) Solve using think addition (e.g., 18 − 16 because 16 + 2 = 18)

13 − 9	14 − 12
20 − 17	15 − 8

2. Let's review some addition and subtraction fact strategies.
d) Solve using a bridging-10 strategy (13 − 7 = 13 − 3 − 4 = 10 − 4 = 6)

12 − 4	15 − 8
14 − 9	19 − 12

2. Let's review some addition and subtraction fact strategies.
e) 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

3. Add using friendly numbers:

a) 198 + 7

b) 299 + 86

c) 7 495 + 1 466

d) 9 998 + 6 297

4. Subtract using compensation:

a) 578 – 299

b) 989 – 398

c) 2 833 – 475

d) 10 000 – 2 999

5. Use a place-value strategy to add or subtract:

a) 845 + 32

b) 1 584 + 215

c) 786 – 63

d) 3 454 − 221

6. Solve:

a) 382 + 546

b) 465 + 3940

c) 943 – 748

d) 6 200 − 4 197

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

a) 3 299 + ___ = 10 000

b) ___ − 2 500 = 1 750

c) 8 000 = 4 899 + ___

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

a) $8\,000 - 2\,999 = 7\,999 - 2\,999 + 1$

b) $8\,000 - 2\,999 = (8\,000 + 1) - (2\,999 - 1)$

c) $8\,000 - 2\,999 = 7\,999 - 2\,999 - 1$

d) $8\,000 - 2\,999 = (8\,000 - 1) - (2\,999 - 1)$

9. Which expression gives a result closest to 2 000?

a) 1 467 + 768

b) 812 + 1 193

c) 2 853 − 493

d) 5 190 − 2 592

10. Which is more:

$4 - 1.9$ or $1.6 + 0.35$?

Explain or show your thinking.

11. Order the sums from least to greatest:

$11.3 + 4.1$, $9.9 + 5.23$, $9 + 6.05$, $5.3 + 9.7$

12. Estimate $3.64 + 4.46$ using the strategy indicated.
Which strategy is closest to the actual sum?

Round each number to the nearest whole number	Round each number to the nearest tenth
Front-end round each number	Front-end round only one number

13. Estimate 14.34 − 6.85 using the strategy indicated.
Which strategy is closest to the actual difference?

Round each number to the nearest whole number	Round each number to the nearest tenth
Front-end round each number	Front-end round only one number

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

4 × 37
86 × 5
6 × 247
43 × 52
609 × 23

15. 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) $960 \div 8 = \_\_\_\_\_ \div 8 + 160 \div 8$

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

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

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

69 ÷ 3	96 ÷ 4
125 ÷ 5	560 ÷ 8
348 ÷ 6	910 ÷ 7

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

48.5 + 21.9	31.2 + 7.98
58.21 - 23.4	8.6 - 2.95
24×37	46×25
348×15	256÷4
246÷3	948÷6

19. Choose three questions:

a) 8+7	b) 28+17	c) 80+70
d) 258+37	e) 488+357	f) 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.

20. Choose three questions:

a) 679+58 b) 236+474 c) 999+998

d) 4500+7250 e) 8999+3331

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.

21. Choose three questions:

a) 3×4 b) 4×8 c) 6×8 d) 4×16

e) 8×12 f) 16×12 g) 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.

22. Choose three questions:

a) 12÷3 b) 18÷6 c) 36÷4 d) 72÷8

e) 80÷10 f) 160÷10 g) 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.

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

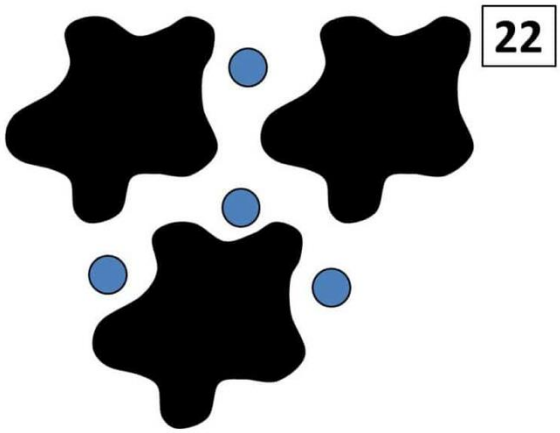
a) 59+___=82 b) 230+___=520

c) ___+90=285 d) 92 - ___=65

e) 951- ___=496 f) 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?

24. 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?



25. Choose three of these math equations to solve:

a) 99 + ___ =175 b) 275 + 850= ___

c) 1000 + ___ =2500 d) 10 × ___ = 360

e) ___ × 20 = 480 f) 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?

26. Choose three questions:

a) 100 – 38 b) 1000 – 273 c) 3000 – 1799

d) 5100 – 625 e) 7475 – 2850.

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.

27. Choose an answer:

1.4 or 5.59 or 0.46

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.

28. Choose three questions:

a) 7.5 – 2.9 b) 6.3 – 4.89 c)1.75 – 0.97

d) 10.49 – 5.8 e) 49.05–24.99

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.

29. Solve each equation:

a) $3 \times 5 =$ ___

b) $3 \times 50 =$ ____

c) $13 \times 50 =$ _____

How does the first question help you solve the other questions?
Show and describe your thinking using pictures, numbers, symbols and words.

30. 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:

a) 2×16 b) 3×18 c) 8×8 d) 12×15 e) 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?

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

a) 4.3 + 2.8, 9.2 – 4.7

b) 2.36 – 0. 97, 8.99 + 6.88 + 5.26

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

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

a) 4.9 - 2.8 b) 8.2 – 3.9 c) 4.00 – 2.85

d) 9.16 – 0.89 e) 8.59 - 1.08 - 2.5

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

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

a) 2.3 + 2.9 b) 5.5 + 4.7 c) 4.55 + 2.85

d) 4.93 + 0.47 e) 6.99 + 9.09 + 5.29

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

34. 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.)

35. Here are some math problems to help us review what we have been 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.

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

a) If 3×4 =12 then 6×4=____ and 3×8=___ because_____.

b) If 16×12= 192 then 8×12=___ and 4×12=___ because _____.

c) If 20×12=240 then 2×12=_____ and 200×12=____ because _____.

37. Let's think flexibly about division and the relationship between multiplication and division. Write out the following questions and answer the missing parts.

a) If 24 ÷ 8 =3 then 24 ÷ 4=____ because _____.

b) If 15 ÷ 3= 5 then 5 ×___=15 and ___ × 5=15 because _____.

c) If 250÷10=25 then 10 × ___= 250 and 10 × ___= 500 because _____.

38. 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.

39. 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.

40. Choose two of the following math questions:

a) 2.8 + 1.7 b) 7.1 – 2.7

c) 2.17 + 3.98 d) 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.

41. 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

42. 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)?

43. Pick one… 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?

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

45. You have three estimates for 2,899 + 1,899:

a) 3,000 + 2,000

b) 2,900 + 1,900

c) 2,000 + 1,000

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?

46. Subtracting numbers like 10 000 - 38 493 are 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 10 000 so that we do not have to regroup?

47. Show two ways to calculate 8 - 3.9. Which way do you prefer and why?

48. 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?

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

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

51. 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.

52. 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.