



COASTMETRO
ELEMENTARY MATH PROJECT

GRADE 2 PRACTICE QUESTIONS
NUMBER SENSE

1. Count by 2s starting at 6. What are the next 5 numbers?

2. Count backward by 5s from 75.
What are the next 4 numbers?

3. What number is 4 jumps of 10 more than 23?

4. A skip-counting pattern is: 15, _____, 25, 30.
Fill in the blank.

5. Count backwards by 10s starting at 47.
What are the next 4 numbers?

6. Start at 13. Count by 2s. Stop when you pass 30.
What patterns do you notice?

7. Skip-count backward from 92 by 10s.
What patterns do you notice?

8. Create your own skip-counting pattern starting at 7.
What rule did you use?

9. A counting pattern starts at 2 and ends at 32.
What numbers could you be counting by? How do you know?

10. Can you find a number that you say when you skip-count by 2s and by 5s?
Any others? What pattern do you notice?

11. Create a number pattern using natural materials.
Explain the rule.

1. Circle the number that is closest to 50:

42, 38, 55, 64

2. Order these numbers from least to greatest:

67, 25, 89, 54

3. Draw an open number line with the given endpoints.
Include useful benchmarks.

0 to 10

0 to 20

0 to 100

4. Which number is halfway between 50 and 100?

5. Which is larger?

63 or 36

Explain how place value helps to answer this question.

6. Which is closer to 100?

87 or 78

7. Is 38 closer to 25 or 50?

8. On a number line, what number comes halfway between 10 and 50?

9. Which is closer to 100? How do you know?

91 or 87

10. Find two numbers that add close to 100 but not more than 100. Can you find more examples?

11. Which is a better estimate for a handful of jellybeans? Why?

20 or 80

12. Is 61 closer to 0 or to 100?
How do you know?

13. You are thinking of a number greater than 60 but less than 80.
What could it be? What clues can you give a friend to guess it?

14. Draw an open number line from 0–100. Pick 2 numbers and explain or show how far apart they are. Show any benchmark numbers that helped you to do this.

15. A friend says that 62 is greater than 71 because 2 is bigger than 1. How would you explain their mistake?

16. Choose two numbers. Can you prove that one is greater without counting by 1s?

17. How are 26 and 62 the same?
How are they different?

18. Choose one of the options below...

Option 1: Use a number line to show whether 13 is closer to 0 or 20.

Option 2: Use a number line to show whether 43 is closer to 0 or 100.

1. What is the value of the **7** in 74?

2. Write 62 as tens and ones.

3. What number has 5 tens and 3 ones?

4. Circle the number that has 4 tens and 7 ones:

74, 47, 84

5. Which number has a digit worth 80?

89 or 98

6. On a hundreds chart, what number is directly below 26?

7. How many tens are in 95?

What number is that?

8. I show you base-ten blocks with 3 tens and 6 ones.

What number is it?

$$9.67 = 5 \text{ tens} + \underline{\hspace{2cm}} \text{ ones}$$

10. 82 = _____ tens + 22 ones

11. $34 = 2 \text{ tens} + \underline{\hspace{2cm}} \text{ ones}$

12. Show 53 in three different ways using tens and ones.

13. How we say a number often tells us about the place value of its digits.

For example, we say “fifty three” for 53, showing us that 53 is fifty and three.

Give another example of a number where this works.
Give an example where this does not work.

14. If I say “seven tens and something,” what numbers could I mean?

15. Show different ways to represent 64 using pictures or materials.

16. Can a number have 3 tens and still be more than 40?
Explain.

17. Show a number less than 50 that is made with more ones than tens.

1. List the odd numbers in order starting at 1 and ending at 19.

2. Is 39 an even or odd number? How do you know?

3. Circle all the even numbers:

18, 35, 42, 67, 50

4. What is the next odd number after 71?

5. Is the sum of two odd numbers always odd? Try $5 + 7$.

6. Which number is not like the others? (Hint: even or odd)

26, 44, 53, 88

7. I have a number between 40 and 50. It is even. The digit in the tens place is the same as in the ones place.

What is the number?

8. What happens when you add an even number and an odd number? Try some and explain.

9. What happens when you add an even and even? Odd and odd?

10. Think of 3 odd numbers between 30 and 50.
What do they have in common?

11. Is 0 even or odd? Why do you think that?

12. Can a number be both even and odd? Why or why not?

13. Which numbers between 1 and 20 are odd and make you think of something in nature?

14. I'm thinking of a number. It has 6 tens. The ones digit is odd. What could it be?

15. I'm thinking of a number. It has 6 tens. The ones digit is odd. What could it be?

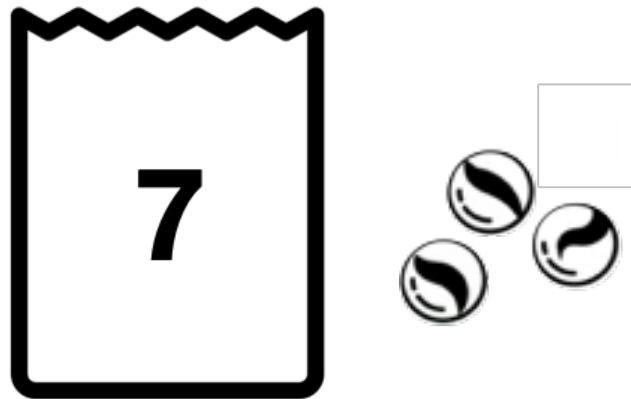


COASTMETRO
ELEMENTARY MATH PROJECT

GRADE 2 PRACTICE QUESTIONS

**COMPUTATIONAL
FLUENCY**

1. Seven marbles are in the bag. Three marbles are next to the bag.
How many marbles are there all together?



2. Use near doubles to add. Show your thinking.

a. $6 + 7 =$	b. $9 + 8 =$
c. $4 + 6 =$	d. $7 + 8 =$
e. $5 + 6 =$	f. $3 + 5 =$

3. Use 10 to add. Show your thinking.

a. $9 + 7 =$	b. $9 + 8 =$
c. $8 + 6 =$	d. $7 + 8 =$
e. $5 + 9 =$	f. $8 + 5 =$

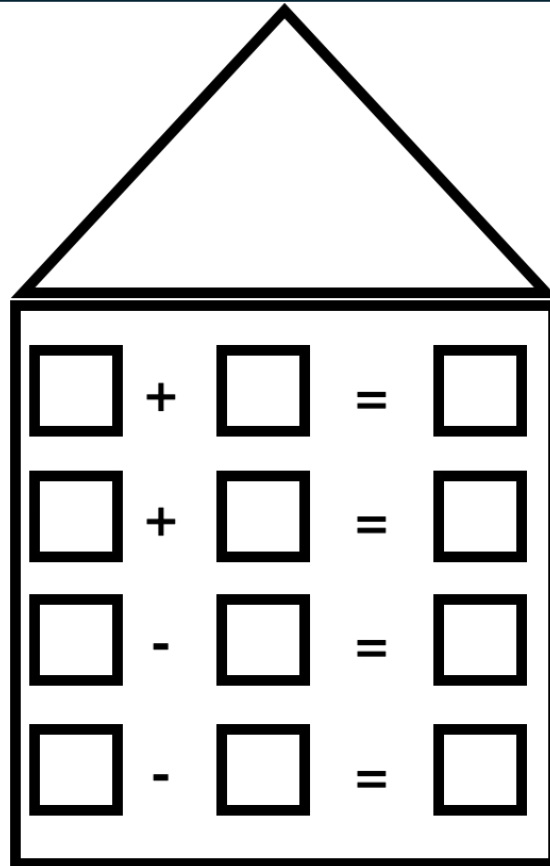
4. Use 10 to subtract. Show your thinking.

a) $12 - 5 =$	b) $11 - 8 =$
c) $14 - 6 =$	d) $15 - 8 =$
e) $17 - 9 =$	f) $12 - 3 =$

5. Subtract by breaking apart numbers. Show your thinking.

a) $19 - 5 =$	b) $18 - 13 =$
c) $14 - 6 =$	d) $15 - 8 =$
e) $17 - 9 =$	f) $12 - 3 =$

6. Write four fact family equations using these numbers:
3, 4, 7.



	+		=	
	+		=	
	-		=	
	-		=	

7. Show how you could use addition to solve $15 - 12$.

8. Use a number line to show that $14 - 8$ is like saying “How far away from 8 is 14?”

9. A dog, a duck, and a spider walk into a room.
How many legs are there all together?

10. Find three numbers that form a fact family: 2, 3, 5, 8.
Show how you know.

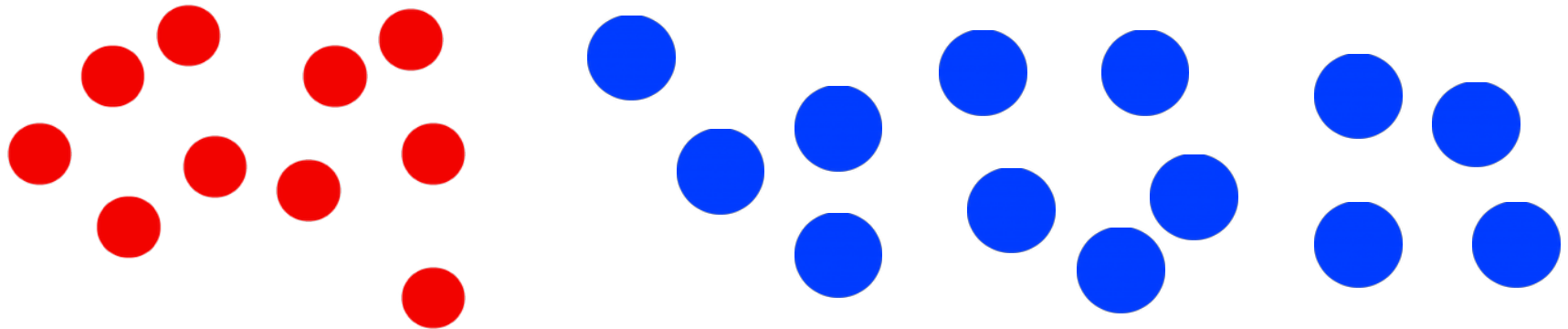
11. Show how you know $3 + 4$ is the same as $4 + 3$

12. Show or explain how you could use a making 10 strategy to add $8 + 7$?

13. How can you show that 18 is more than 13?

14. Without finding the answer, why is $8 + 8$ more than $5 + 9$?

15. Organize the following circles to help you see how many there are in total.



16. What are some different ways to make the number 12 using addition? Show different combinations.

17. What is your favourite way to find the sum of 6 and 9? Show your thinking

18. Which of the following statements is incorrect? Explain your thinking.

- a. 12 take away 7 leaves 5.
- b. 12 is 5 more than 7.
- c. $12 - 7 = 5$ and $5 + 12 = 7$ are part of a fact family.
- d. $7 + 5 = 12$ is the same as $5 + 7 = 12$

19. Show what you think is the best way to add $4 + 8 + 6$.

20. Why does it make sense that $8 + 5 = 10 + 3$? Why is knowing that useful?

21. How do you know that $10 - 3$ and $11 - 4$ HAVE to have the same answer even without getting the answer?

1. Draw a diagram that shows why $54 - 17$ is the same as $54 - 10 - 10 + 3$

2. How can base ten blocks be used to model $37 - 25$?

3. Use compensation strategy to add. Show your thinking.

a) $19 + 32$	b) $39 + 28$
c) $59 + 15$	d) $17 + 49$
e) $16 + 39$	f) $34 + 29$

4. If you start the year with 34 pencils and then you lose 6 of them, how many are you left with?

5. Use a hundreds chart to solve the following questions:

a. $75 - 23$

b. $84 - 12$

c. $55 - 18$

d. $63 - 31$

6. What is the difference between 87 and 13? Solve using a hundreds chart.

7. What is $72 - 38$? Use an open number line to show your thinking .

8. I need 100 beads to make a special bracelet for my friend. I only have 25 beads. Using a number line, can you find out how many more beads I need?

9. The answer is 25. What is the question?

10. How does knowing $25 + 25$ help you to find $26 + 26$?

11. You add a number to itself. The answer is more than 20.
What might the number be? Why?

12. Write a story problem that could be figured out using 40 counters and the concept of addition.

13. Show at least 3 different ways you can break down the number 50 using addition.

14. How can you show which statement is more correct?
- a. 66 is closer to 70
 - b. 66 is closer to 60

15. A jar can hold 100 jellybeans. In a pile of jellybeans, there are 31 red, 26 green, and 47 yellows. Will they all fit in the jar? How do you know?

16. Show two or more ways to calculate $37 + 49$.



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GRADE 2 PRACTICE QUESTIONS

PATTERNS

1. Continue the next 3 steps in each of the patterns below:

START OF THE PATTERN	WHAT COMES NEXT?		
3, 6, 9, 12			
2, 5, 8, 11			
1, 4, 7, 10			

2. Can you identify the pattern rules from question 1?

PATTERN	PATTERN RULE
3, 6, 9, 12	
2, 5, 8, 11	
1, 4, 7, 10	

3. What are the next 3 shapes in this pattern?



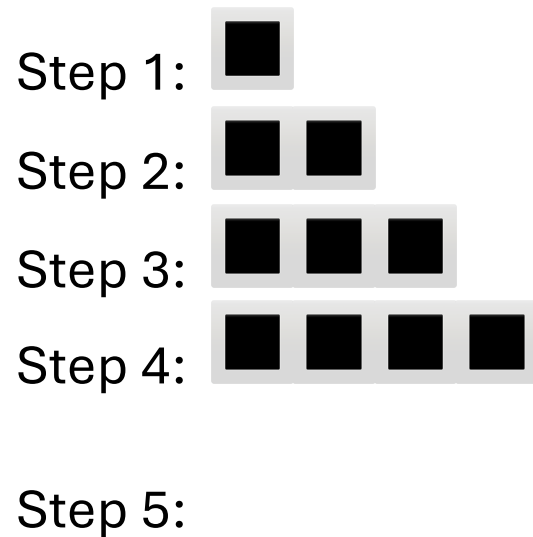
4. Which pattern has an ABB rule?



5. Can you fill in the table below using the patterns from question 4?

Original Pattern	Pattern Rule	Continue the Pattern (6 more cars)
a. 		
b. 		
c. 		
d. 		

6. How many tiles will be in the 5th step of this pattern?



7. Which of the following is a growing pattern?



8. I'm thinking of a pattern that uses 2 shapes and follows an AAB rule.

What could my pattern look like?

9. I'm thinking of a pattern that uses 3 shapes and follows an ABBC rule.

What could my pattern look like?

10. Can you create a growing pattern using only 2 shapes?

11. There is a mistake in this pattern:

2, 4, 6, 9, 10, 12

What is the mistake and how do you know?

What can you change to correct the pattern?

12. I'm thinking of a pattern that counts by 5s but doesn't start at 5.

What could the pattern be? How do you know it follows the rule?

13. Here's a number pattern:

1, 2, 4, 7, 11, ____

What could the next number be? Explain how you figured it out.

14. There is a mistake in this pattern:

10, 20, 30, 50, 60

What do you think the mistake is? Could there be more than one way to fix it?



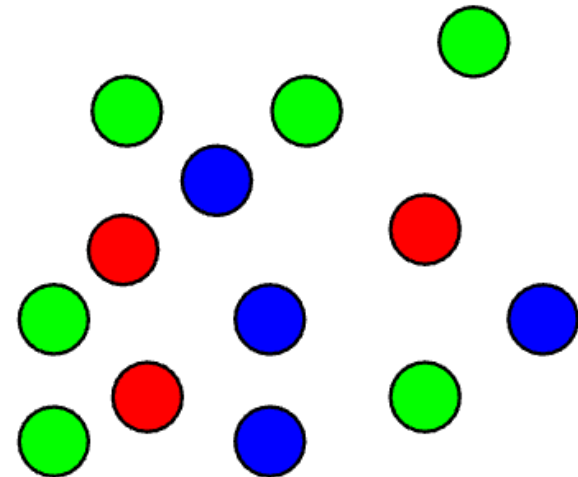
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GRADE 2 PRACTICE QUESTIONS

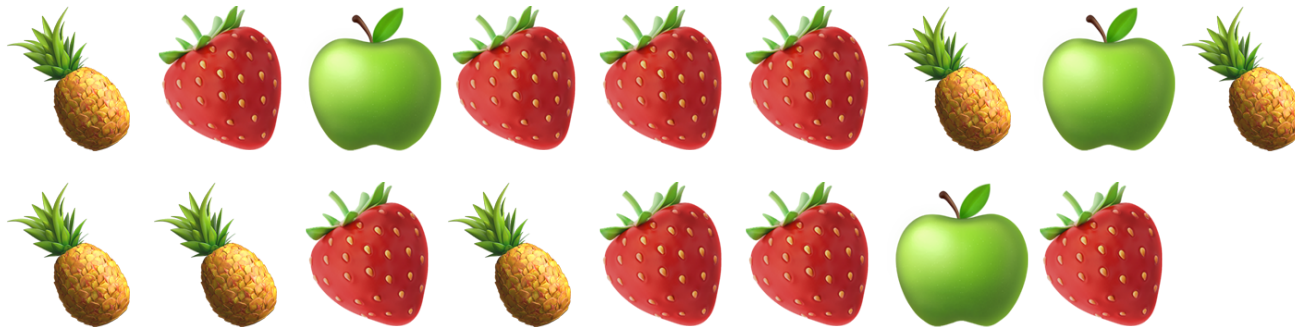
DATA

1. Count the different coloured balls using a tally chart.
Record your counting.

Colour	Tally
Green	
Red	
Blue	



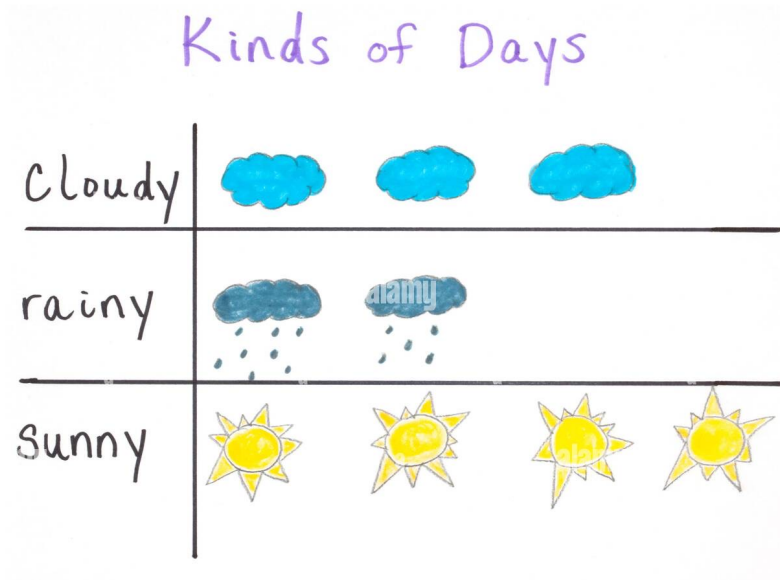
2. Use two-colour counters or Unifix cubes to represent how many pineapples and strawberries there are.



3. Look at the following tally chart. Create a **Bar Graph** or a **Concrete Graph** using the data. Include all the important labels and a title.

Student pets in Div.15	Tally
Dogs	
Cats	
Fish	
Tigers	

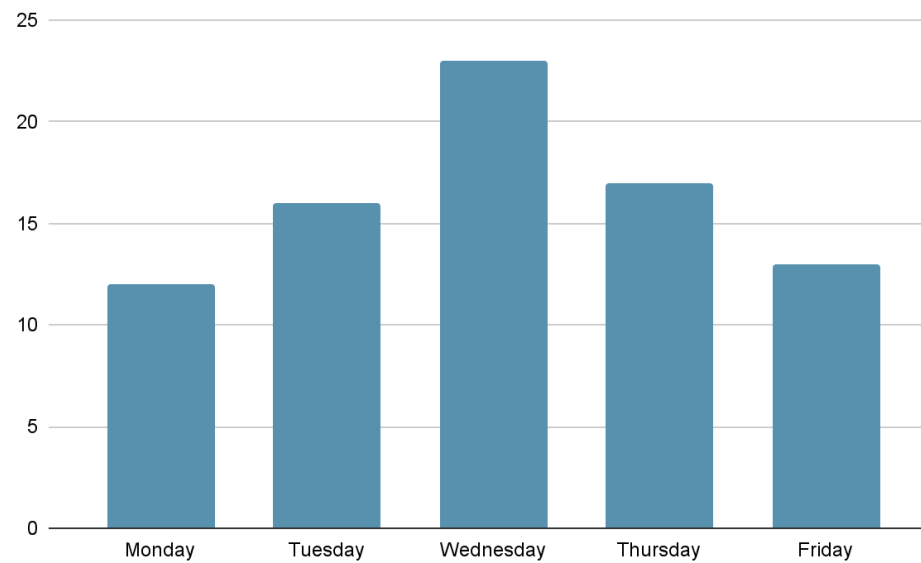
4. Look at the following pictograph.



Use it to answer the following questions:

- How many total days did the students collect data?
- How many sunny days were there?
- Were there more days with cloud or sun?

5. Describe what you think this graph could be trying to tell us and give some reasons why.



6. Look at the following tally chart. What are some questions you could ask using the data?

Student pets in Div.15	Tally
Dogs	
Cats	
Fish	
Tigers	

8			
7			
6			
5			
4			
3			
2			
1			
	Hot dogs	Tacos	Sandwiches

7. For the pictograph to the left, what are some things that you can't say about the data?

8. Collect data in your class about something you can see. (It could be the types of coloured pencils, or who is wearing boots or shoes...)

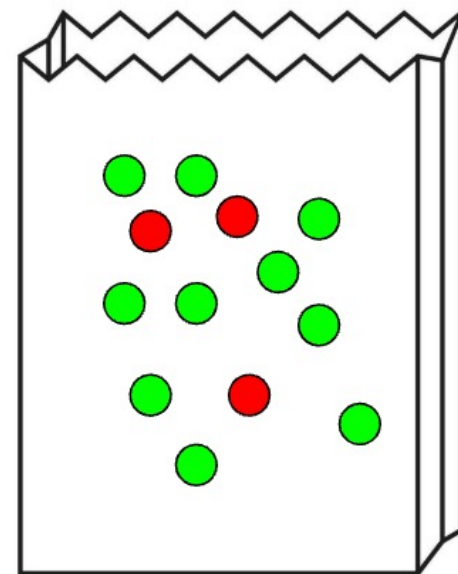
Use a **tally chart** to record your data. Use that tally chart to make a **bar graph**.



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GRADE 2 PRACTICE QUESTIONS
PROBABILITY

1. There are 10 green candies and 3 red candies in a bag. If you pick one without looking, explain which colour you are more likely to get.



2. Use the scale on the line to put down how certain or uncertain you are of these things happening tomorrow:

- a. We will have recess.
- b. It will rain.
- c. We will have Music class.
- d. Someone will wear a red shirt.
- e. I will see the principal.

Uncertain

Certain



3. When you walk to school, which of these things are you more likely to see? Explain why.

	More Likely	Less Likely	Why?
Dog or lion			
Car or Airplane			
Tree or Cactus			

4. Write down something you think you will **never** see walking to school.

5. Explain what it means if two things are “equally likely” to happen.
Give an example.

6. Look outside. Explain why you think it will be “More Likely,” “Less Likely”, or “Equally Likely” to rain tomorrow.

7. In this bag there is a coloured marker. How certain are you that it is green? Tell me why you think that?

8. You are sitting at your desk at school. Explain what days of the week are you certain it is not? What days of the week are you certain it could it be?

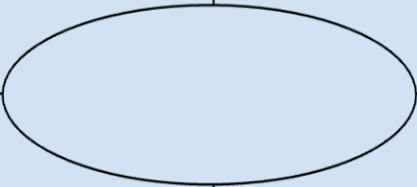


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GRADE 2 PRACTICE QUESTIONS
GEOMETRY

1. Choose one of the shapes below. Write the name in the middle. Answer the questions in each of the 4 corners for your shape.

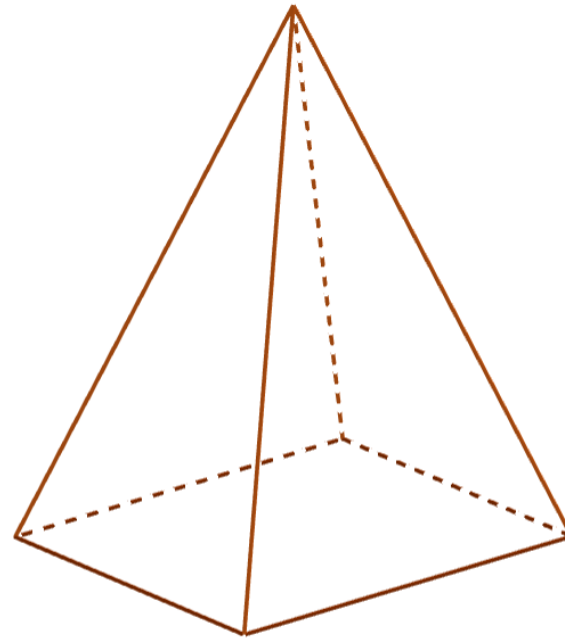
- a. **Circle**
- b. **Triangle**
- c. **Square**
- d. **Rectangle**

Draw your shape	List 2 things about your shape
	
Draw a shape that is not your shape	Where do you see your shape?



2. Look at this image.
Circle 3 shapes you see.
How do you know what
shapes they are?

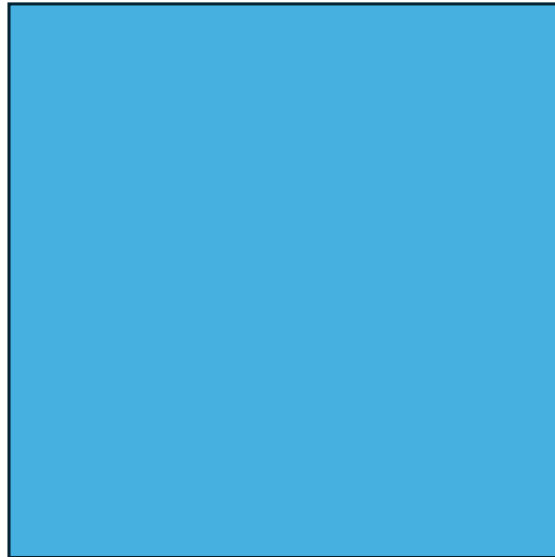
3. Explain what shapes you would need to build a pyramid.





4. Choose 3 or more shapes from your tangram set. Put them together to form a new shape. Draw (or trace) the shape. Can you show the original smaller shapes?

5. What would you need to measure to show if this is a square?



6. Choose one of the shapes below. Find that shape in the classroom. Draw a picture of it.

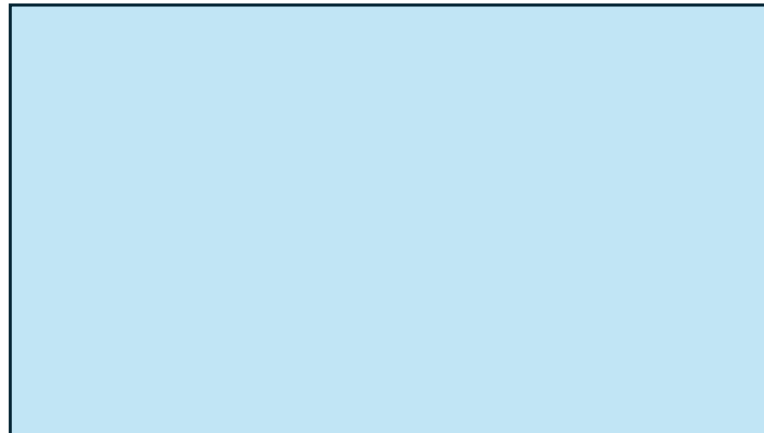
Circle

Triangle

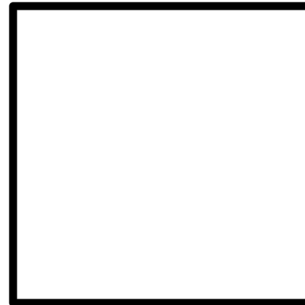
Square

Rectangle

7. What smaller shapes could you cut from this rectangle? Use the materials provided to help. Write the name of shape on each of the pieces you cut. (Provide rectangles and scissors)
How many shapes could you cut?



8. This is one face of a 3-D object. What could the rest of the object look like?



9. Draw 3 shapes that all have the same number of sides, but look different. Explain how they are different.

10. Draw a 3-D shape.
Cut it in half. Draw and
describe the new shape.

Original 3-D Shape	New Half Shape

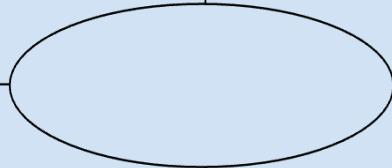


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ELEMENTARY MATH PROJECT

GRADE 2 PRACTICE QUESTIONS
MEASUREMENT

1. Choose one of the measurements below. Write the name in the middle. Answer the questions in each of the 4 corners for your measurement.

- a. millimeter**
- b. Centimeter**
- c. meter**
- d. kilometer**

I could use it to measure ...	It's about as big as a...
	
What is it's symbol?	You could find it on a...

2. Use a ruler to measure how long (from head to tail) this dragonfly is in centimeters (cm)



3. Without measuring, what do you think the length of a tissue box is?

Smallest possible length	My estimate for length	Biggest possible length

4. Use a piece of string or rope to help you figure out about how far it is around a tree.

5. Describe how the shapes are related to each other using the following words:

Left

Right

Up

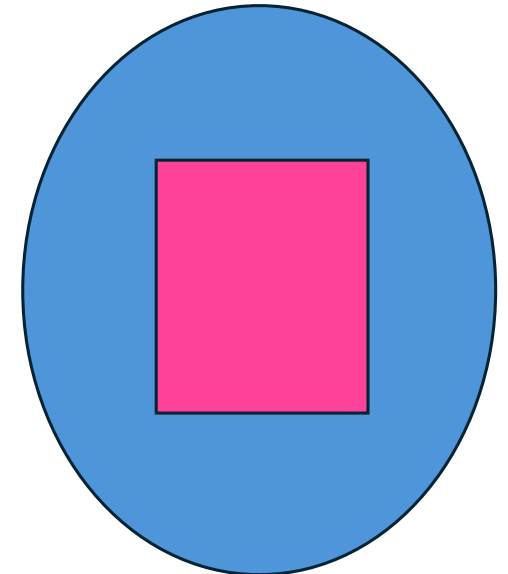
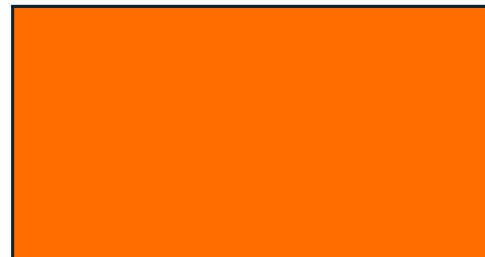
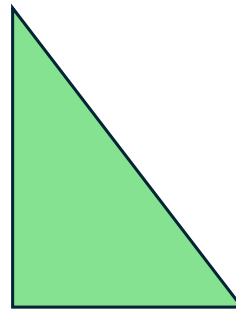
Down

Above

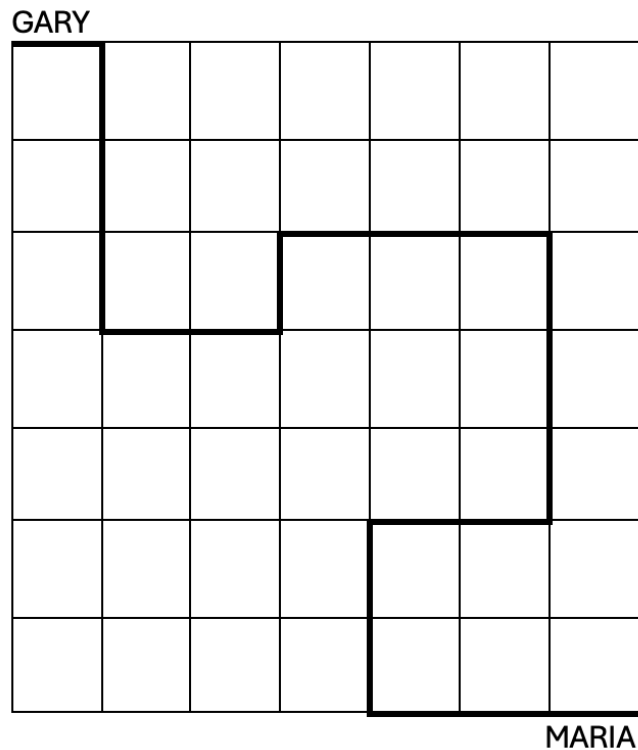
Below

Inside

Outside



6. Use the cm grid to explain how Gary could walk to Maria.



7. Measure a part of your body (length of a finger, fingertip to elbow, width of a hand).
- a. Use that body part to estimate the width of your desk
 - b. Use that body part to estimate the width of a whiteboard or tackboard

8. Find an object in your classroom. Using a ruler, measure the length, width and height in millimeters or centimeters.

9. Explain how one person could measure something and get a really big number, and a different person could measure something and get a small number.

10. Explain how you could measure the length of a hallway at school if all you had was a 30cm ruler



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GRADE 2 PRACTICE QUESTIONS

ALGEBRA

1. Can you solve the equations (number sentences) below?

EQUATION	SOLUTION
a.  + 4 = 9	 =
b. 3 +  = 10	 =
c. 12 =  + 6	 =
d. 11 -  = 6	 =
e.  - 10 = 15	 =

2. Fill in the blank:

$$5 + \square = 10$$

$$\square = \underline{\hspace{2cm}}$$

3. Which of these number sentences is correct (balanced)?

a. $6 + 2 = 7$

b. $4 + 3 = 8$

c. $5 + 5 = 10$

d. $3 + 3 = 5$

4. Can you match the unknowns in each of the questions in the left column with an answer from the right column? Draw lines to show your matches.

Questions	Answers
$\square + 3 = 12$	2
$4 + \square = 6$	4
$10 + \square = 15$	3
$\square - 3 = 7$	9
$14 - \square = 10$	8
$\square + 8 = 11$	6
$19 - \square = 11$	10
$14 + \square = 20$	5

5. What number makes this true?

$$\square - 3 = 4$$

$$\square = \underline{\hspace{2cm}}$$

6. Which equation shows the same total as $7 + 2$?

a. $8 + 2$

b. $6 + 3$

c. $5 + 1$

e. $4 + 2$

7. What number makes this true?

$$8 = 5 + \square$$

$$\square = \underline{\hspace{2cm}}$$

8. Look at this equation:

$$4 + \square = 9$$

What number belongs in the box?
Can you show how you figured it out?

9. What are two different ways to make the number 8 using addition?
Can you show both with pictures or tools?

10. Look at this equation: $6 + \text{🐰} = 9$

If I told you that $\text{🐰} = 2$, that answer would be wrong.
How can you show that 🐰 does not equal 2?

11. I had 4 red apples 🍏. I picked some green apples 🍏 and I had 9 apples in total.

How many green apples did I pick? Can you draw a diagram to answer this question?

12. There's a mistake in this number sentence:

$$6 + 3 = 10$$

What might the mistake be? How would you fix it?



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GRADE 2 PRACTICE QUESTIONS
FINANCIAL LITERACY

1. You have 4 quarters.
How much money do you have?
a. \$1 b. \$2 c. \$3 d. \$4

2. Which of these is worth the most?
- a. 4 quarters
 - b. 3 dimes and 2 nickels
 - c. 5 nickels
 - d. 1 loonie

3. You bought a snack for \$3 and gave the cashier a \$5 bill.
How much change should you get back?

4. You have \$5. You buy a book for \$3 and a pencil for \$1.
How much money do you have left?

5. Which coin is worth 10 cents?

a. Penny b. Dime c. Nickel d. Quarter

6. How many quarters do you need to make \$1?

7. I have 4 toonies. How much money do I have?

8. There are many ways to make \$1.00.
Can you draw or write two different ways using coins?

9. What do you think costs more? Explain your thinking.
- a. A house or a car?
 - b. A cake or a cupcake?
 - c. A box of pencil crayons or a stapler?
 - d. A burger or a pizza?

10. Take a look at this menu

ITEM	PRICE
Apple 🍏	\$1
Juice Box 🥤	\$2
Sandwich 🥪	\$3
Cookie 🍪	\$1
Banana 🍌	\$1
Crackers 🍪	\$2

a. What is the least expensive item on the menu?

b. What is the most expensive item on the menu?

c. You want to buy a sandwich and a juice box. How much will that cost?

10. Take a look at this menu

ITEM	PRICE
Apple 🍏	\$1
Juice Box 🥤	\$2
Sandwich 🥪	\$3
Cookie 🍪	\$1
Banana 🍌	\$1
Crackers 🍪	\$2

d. How much would it cost to buy everything on the menu?

e. If I gave you \$3, what would you choose to buy?
Describe why you would make that choice.

11. You see two shopping lists.

List A: cookie, banana, juice

List B: sandwich, apple

Which list costs more? Explain how you figured it out.

12. You spent \$3 and got \$2 back.
What could you have bought?
List two different options.

13. You and 2 friends are buying treats.

A box of cookies with 6 cookies costs \$10.

A box of cupcakes with 3 cupcakes also costs \$10.

Which treat would you choose? Why would you make that choice?



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GRADE 2 PRACTICE QUESTIONS
MIXED REVIEW

1. I want to buy three board games. They cost: \$48, \$24 and \$13 (including tax). I have a \$100 bill. Is that enough to buy all three games?

2. You're celebrating your birthday with 6 friends. Will baking 12 cookies be enough for you and your guests? Explain. Is that enough to buy all three games?

3. A student says $100 - 46 = 64$. Does this answer make sense?

4. The distance from New Westminster to Vancouver is 29 km. If you walk 10 km every hour, about how many hours will it take to get to Vancouver?

5. About how many candies are in the candy bowl?



6. Continue the pattern. What is the pattern rule?

1, 2, 4, 8, 16, ____, ____, ____

7. I'm thinking of a 3D shape that has rectangular faces. What shape could it be?

8. Estimate the value letters A, B, and C below:



9. If I'm counting up by 10s starting at 42, will I say 80?

10. A video game costs \$79. If you pay with a \$100 bill, how much change would you get back?

11. How many ways can you make 35 cents using nickels, dimes, and quarters?

12. True or False? 3 Tens + 3 ones = 20 + 13. Explain.

13. What numbers come next? What's the pattern rule?

21, 33, 45, 57, __, __, __,

14. Mental Math:

$$26 + 70 =$$

$$88 - 40 =$$

15. Calculate. Hint: How does question 14 help?

$$26 + 76 =$$

$$88 - 46 =$$

16. What numbers come next...

43, 45, 47, ____, ____, ____

63, 73, 83, ____, ____, ____

17, 22, 27, 32, ____, ____, ____

17. What strategies do you use to recall:

$$4 + 8 =$$

$$15 - 6 =$$

18. How does thinking about 74 as $60 + 14$ help us to calculate $74 - 37$? When do you use this idea?

19. How are $8 + 4$ and $12 - 8$ similar? How are they different?

20. Count forward by 10s starting at 37.

21. Fill in the blank:

1 foot = ____ inches

____ feet = 1 yard

____ cm = 1 m

1 km = ____ m (bonus!)

22. Would you measure the length of your bedroom in centimetres, feet, or metres? Why?

23. How many kinds of 2D shapes and 3D solids do you see from where you are right now? Name them.

24. Continue the pattern: 2, 7, 12, 17, 22, ...

25. Skip count by 2s starting at 31 beyond 50

26. Which is greater: $36 + 25$ or $81 - 18$? How do you know?

27. How many ways can you make 10? Show using number bonds or equations.

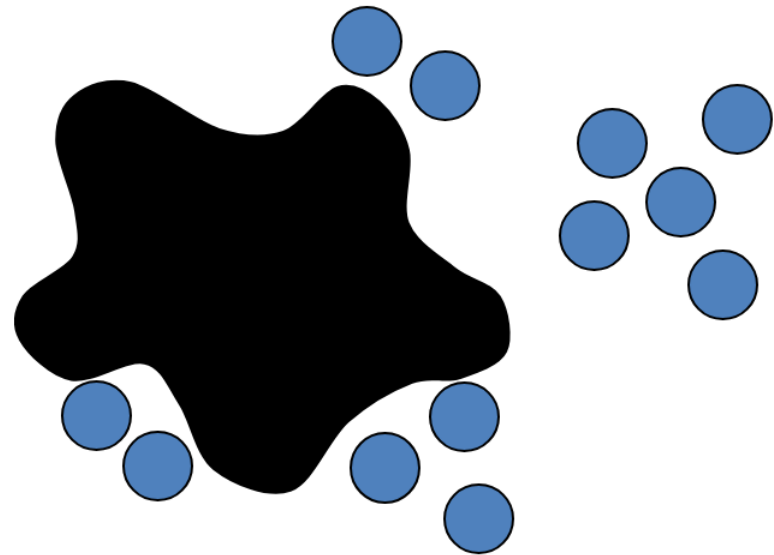
28. How many ways can you make 44 using 10s and 1s?

29. Which One Doesn't Belong? Justify your choice.

48 37 73 84

18

30. How many blue circles are hiding under the “splat” if there are 18 circles all together? How do you know? How else do you know?



31. Where would you place the number 27 on the number line below? Explain your strategy.



Today's Number

45

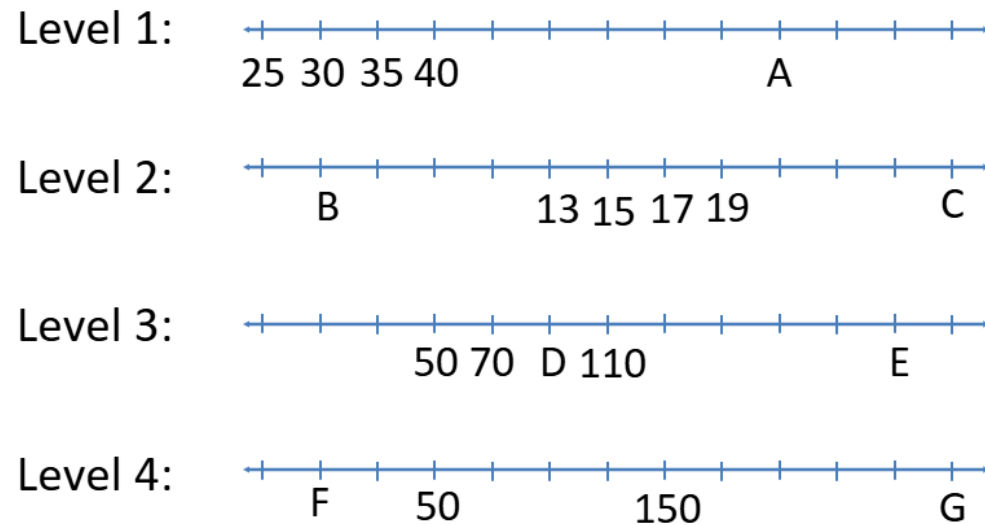
32. Show me everything you know about the number 45 using pictures, numbers, symbols, and words.

Some ideas...

- How many 10s and 1s? How many ways can you do this?
- Write an equation of the form...
 - $\underline{\quad} + \underline{\quad} = 45$
 - $\underline{\quad} - \underline{\quad} = 45$
 - $\underline{\quad} + \underline{\quad} + \underline{\quad} = 45$
- Even or odd?
- Draw with ten frames, base 10 blocks, or number bonds
- Put it on a number line
- Round to the nearest 10
- Count forward/backward by 1s, 2s, 5s, or 10s
- Write a word problem

Number Lines

33. Number Line Game. Which level can you solve? How did you solve it?



34. Estimate the lengths of the strings in the picture below. Explain how you did this.

