Fourth Grade:
Benchmark 3

Parent Handbook

This handbook will help your child review material learned this quarter, and will help them prepare for their third Benchmark Test. Please allow your child to work independently through the material, and then you can check their work using the answer key in the back of the handbook. If you have any questions or concerns about this material, please contact your child's teacher. Thank you for your support.
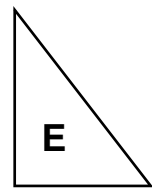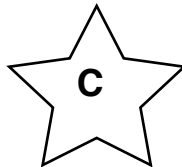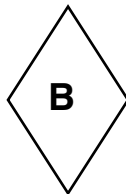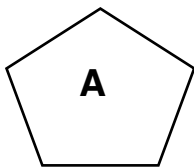
Fourth Grade Math Essential Standards

Learning Objective # 1:

"I can describe two dimensional figures using different characteristics such as: parallel or perpendicular lines or by angle measurement."

Practice:

1. Which figures below have perpendicular sides?

        a. Figures D & E
  b. Figures A & C
  c. Figures B & D
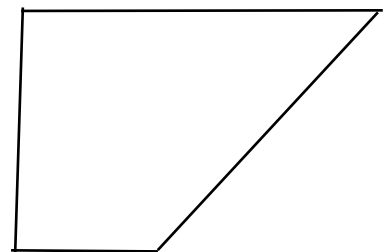 d. Figures B & D & E

2. Does the quadrilateral below have any perpendicular lines or parallel lines? If so,   identify them on figure.

   a. No, there are no perpendicular or parallel lines.
   b. Yes, there are 2 sets of perpendicular lines and
      1 set of parallel lines.
   c. Yes, there are 2 parallel lines
   d. Yes, there are 2 perpendicular lines.

Learning Objective # 2:

"I can solve measurement word problems using all four operations."

Practice:

3. Alan went on a bike ride a few nights last week. On Monday, he rode for 45 minutes. On Tuesday, he rode for 30 minutes, and on Wednesday and Thursday he rode for 50 minutes total. How much total time did Alan ride his bike for last week?

    a. 1 hour and 45 minutes
    b. 2 hours
    c. 2 hours and 5 minutes
    d. 2 hours and 45 minutes

4. Sophia has $10 to spend at the grocery store. She bought bananas for $1.75, bread for $2.15, and peanut butter for $5.20. How much money will she receive in change?

    a. $0.90
    b. $1.90
    c. $1.09
    d. $0.99

Learning Objective # 3:

"I can use an algorithm (formula) to find the area and perimeter of a rectangle and justify my answer."

Practice:

5. Mike is building a fence around his rectangular dog run. One side of the yard is 42 feet long and another side is 45 feet long. How many feet of fencing should Mike buy to put around his dog run?

    a. 169 feet
    b. 174 feet
    c. 185 feet
    d. 194 feet

6. Barbara needs to build a cage for her bunny. It will need to have an area of 25 sq. feet. What is the length of each side?

    a. 6 feet

    b. 4 feet

    c. 7 feet

    d. 5 feet

Learning Objective # 4:

📌 **" I can convert in the same system of measurement, e.g., U.S. Customary, metric system, and time."**

Practice:

7. Alex went to the skate park with her friends for 3 1/2 hours. How many minutes was she at the skate park?

    a. 310 minutes

    b. 210 minutes

    c. 225 minutes

    d. 270 minutes

8. Layla made 1,700 milliliters of lemonade for her party. Which container below has a greater capacity than Layla's lemonade?

    a. a 1 liter bottle of apple juice

    b. a 2 liter bottle of apple juice from which 500 milliliters has been removed

    c. a 1 liter bottle of water and a 500 milliliter bottle of tea

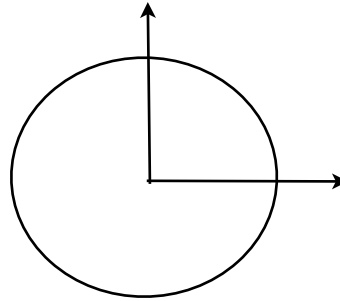   d. a 2 liter bottle of water

Learning Objective # 5:

" I can explain the concepts of angle measurement."

Practice:

9. Look at the angle below. If the top ray in the angle has made 90 turns, then what fraction below represents the angle?

a. 90/360

b. 90/180

c. 90/160

d. 90/90

10. If a sprinkler turns 1 degree every second, what will the angle measure when it has turned for 3 minutes?

a. 90 degrees

b. 120 degrees

c. 180 degrees

d. 60 degrees

Learning Objective # 6:

" I can solve multistep word problems with all four operations including estimation."

11. Betty baked 4 trays of 12 cookies. After they cooled she divided the cookies evenly into 6 bags. How many cookies did Betty put in each bag?

a. 10 cookies

b. 8 cookies

c. 6 cookies

12. Six adults and 3 classes of 30 students were going on a field trip to the zoo by bus. If each bus holds 34 passengers, how many buses are needed?

  a. 2 buses

  b. 3 buses

  c. 4 buses

Learning Objective # 7:

  " I can identify and create a number or shape pattern that follows a given rule."

13. Complete the pattern:

  4, 12, 36, 108, ___

  a. 298
  b. 432
  c. 324

14. Write the first 4 numbers of the pattern that follows the following rule:

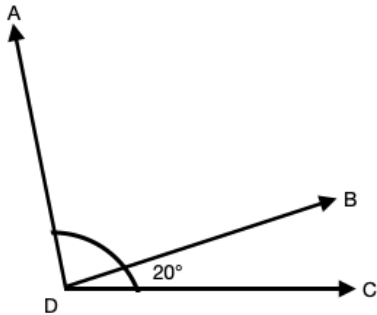 Begin with 12, add 4 and subtract 5.

  a. 12, 16, 20, 24
  b. 12, 10, 8, 6
  c. 12, 11, 10, 9

Learning Objective # 8:

📌 **" I can analyze an angle to find its missing parts."**

15. If angle ADC is 100°, what is the measurement of angle ADB?

A

B

20°

D   C

a. 120°

b. 80°

c. 70°

d. 90°

Benchmark 3 Essential Math Vocabulary

✳ **parallel:** lines in the same plane that do not intersect and are always the same distance apart

✳ **perpendicular:** two lines that intersect to form right angles

✳ **right angle:** an angle whose measure is 90 degrees

✳ **acute angle:** an angle whose measure is less than 90 degrees

✳ **obtuse angle:** an angle whose measure is more than 90 degrees

✳ **straight angle:** an angle whose measure is 180 degrees

✳ **isosceles right triangle:** a right triangle that has at least 2 congruent sides

✳ **scalene right triangle:** a right triangle with no sides the same length and no congruent angles

✳ **area:** the space inside a shape or figure

✳ **perimeter:** the distance around a shape or figure

✳ **algorithm:** a formula used to solve a problem

✳ **intersect:** lines that cross paths, meeting at a point

✳ **Customary System:** a measurement system used in the United States based on yards as a unit of length and pounds as a unit of weight

✳ **Metric System:** a universal measurement system using meters to measure length and grams to measure mass

✳ **rule:** how the numbers change in a pattern

✳ **pattern:** a list of numbers that follow a certain sequence

Math Answer Key

1. A
2. B
3. C
4. A
5. B
6. D
7. B
8. D
9. A
10. C
11. B
12. B
13. C
14. C
15. B

Fourth Grade Essential Reading Standards

Learning Objective # 1:

"I can connect traditional words and phrases to modern-day words and phrases."

Practice:

1. Read the passage:

The boy and his sister hiked silently through the woods searching for acorns. They suddenly saw a small stream running through the trees. The water sparkled with animation. The boy and his sister ran to the beautiful water and dipped their toes in the cool, icy water, and quickly forgot all about the acorns.

The story says that the, "water sparkled with animation," which means _____.
     a. black and dull
     b. white and smooth
     c. twinkled and glistened

2. It's been a long day of baseball and we were on our last inning. I saw the ball flying towards me and I went for the catch. Jumped up with all my might and when I landed, my feet missed the ground and I went down. The players around me ran over and carried me away. My mom rushed me to the doctor and she took a look at my ankle. It was broken! With one magical touch, I was in a cast and on my way home. Man, what a day!

   What does "with all my might" mean?

     a. with little strength
     b. with all the effort and power possible
     c. with little effort

Learning Objective # 2:

"I can explain how an author uses evidence to support a point."

Practice:

<u>**Color Waves**</u>

Great painters are great seers. They can think of an object in their mind, or look at something in the world, such as a tree or house, and create a version of it with brushes and color. They are like mirrors that can share the images that they reflect. Every painter sees differently too. Many painters paint flowers, yet no two paintings look the same.

Why does every painter paint differently? It's because they look at flowers from their own eyes and nobody else's. The different angles that painters look at flowers show all the abilities of the eyes to understand light and color.

How the eyes understand light and color

The eyes understand light and color as waves. Waves are around us all the time, not just when we go swimming in the ocean. Sure, there are waves made of water, but there are also waves made of light, sound and color. One thing about waves is that they're always moving. That's because waves have energy. While their energy is what keeps them moving, waves are held together by magnetism.

Magnetism is the power to be attracted to something. Attraction brings things together and holds them together. That's why magnets stick.

No matter what a wave may be made from, its matter stays together. For instance, the matter of the ocean is water. Colors need to reflect. Yellow doesn't want to blend in with red, which is trying to stand apart from purple. Green doesn't want to be seen as blue, orange doesn't want to be seen as brown. A color's energy, which is made of light, keeps moving at the same size and speed, as a wave.

The length of red's wave is longer than blue's. The difference between red and blue's wavelengths is exactly why we see them as two different colors. Every color in the rainbow has its own unique wavelength to make it stand out from the others.

The difference between looking and seeing

Whether it's a tomato or a cloud, painters don't just accept what they're looking at as something they've seen before. When they paint they are always seeing something new. They try to pay very close attention and look for details they may have missed.

They often see more than other people by staying curious about the light, shape and color of what they're looking at.

By training their ability to see all those details, painters learn to show others how they see. Each painting becomes a reflection of the trees, flowers, or people as the painter absorbs those things. They can look at the night sky and see the moon or stars as waves of yellow, blue, and black. They can look at a person's face and see their cheeks as rosy, pale or creamy colored. Since no artist can look through another artist's eyes, every interpretation of a scene or image, meadow or sunset turns out the way that painter chooses to paint the waves he sees.

3. Read this sentence from the passage: "Every color in the rainbow has its own unique speed and sized waves to make it stand out from the other colors."

What evidence from the text best supports this statement?
   a. The speed of red's waves is slower than blue's, but the size of red's waves is bigger.
   b. Colors often blend together in the artists mind and that is how art is unique and different for every artist.
   c. Yellow doesn't want to blend in with red, which is trying to stand apart from purple.
   d. Waves are always moving because they have energy.

4. According to the author, how is an artist like a mirror?
   a. The artist usually paints himself in his work.
   b. The artist's work reflects his life.
   c. The artist reflects the unique waves of each color in their art.
   d. The artist paints objects exactly how they look.

Learning Objective # 3:

"I can compare and contrast similar themes and topics in traditional literature."

Practice:
Compare both stories and answer questions #5 - 7.

Why Bat has no friends
Based on a Native American Indian Legend - retold by Agor

Many years ago there was a great war between the birds and the animals. No-one knows why. It just happened. The creatures with wings flew to the battle site and made their camp. Those who had legs, walked there. Bat joined the birds. "Hey, I've got wings. So I must be a bird. And there are more of us, so we should win!" The first battle was long and hard, but gradually slashing claws and tearing teeth began to win over beaks and wings. Bat could see that the birds were losing so he hid behind a bush.

5. What is the theme of Why Bat has no Friends?
    a. Bats are not birds.
    b. Join the team that has the most members.
    c. No matter the cost, be supportive of your friends.

The Ant and the Grasshopper

In a field one summer's day a Grasshopper was hopping about, chirping and singing to its heart's content. An Ant passed by, bearing along with great toil an ear of corn he was taking to the nest. "Why not come and chat with me," said the Grasshopper," instead of toiling and moiling in that way?" "I am helping to lay up food for the winter," said the Ant, "and recommend you to do the same. "Why bother about winter?" said the Grasshopper; we have got plenty of food at present." But the Ant went on its way and continued its toil. When the winter came the Grasshopper had no food and found itself dying of hunger, while it saw the ants distributing every day corn and grain from the stores they had collected in the summer. Then the Grasshopper knew: It is best to prepare for the days of necessity.

6. What is the theme of The Ant and the Grasshopper?
    a. When you don't prepare for the future, you miss opportunities.
    b. It is okay to procrastinate. Everything will always work out for you.
    c. Be nice to your neighbors so they help you in the future.

7. When comparing both stories, how are the actions of the grasshopper similar to the actions of the bat?

      a. Grasshopper and Bat are both selfish and only do what is in the best interest of themselves.

      b. Grasshopper and Bat would not help out their friends because they were busy with another important task.

      c. Grasshopper and Bat were not invited to participate in the activities that the others were doing, therefore they could not help.

Learning Objective # 4:

"I can identify the narrative point of view in a story (e.g. first person or third person). I can compare and contrast narrative points of view from different stories."

Practice:

Read the following passages below:

Evangeline sits at the head of the long, oak table. Traditionally, this is where the man of the house ought to sit. But Evangeline, though she considers herself very traditional, is not willing to cede control of the table to her husband, Steve. She sits very straight and surveys the steaming array of dishes with a smile: steak, scalloped potatoes, garlic green beans, honey-glazed carrots, and an orange and walnut salad.

8. What point of view is the passage above written from?

    a. First person because it uses "I" and is told by Evangeline.

    b. Third person because it uses "she" and tells only how the character feels.

Read the following passages below:

It was a dark winter day and the air was bitterly cold. Toad and Mouse sat by the fire trying to stay warm. Toad sat in a fireside chair sipping a cup of tea. Mouse sat on the rug near the fire's hearth knitting a new pair of mittens. Mouse rubbed his paws together to try and keep his fingers from freezing stiff, and thinking about playing ball in the warm sun. Toad was lost in a daydream wishing it was spring and he could hop through the flowers again.

9. What point of view is the passage above written from?

    a. first person

    b. third person

10. Re-write the story of the Toad and Mouse from the point of view of the Toad.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

11. How is your version of the story different from the original version in Question #10?

_____

_____

_____

_____

_____

_____

_____

<u>Benchmark 3 Essential Reading Vocabulary</u>

✱ <u>details</u> - pieces of information that support the main idea

✱ <u>evidence</u> - anything used to prove something to be true

✱ <u>author</u> - the person who wrote the story

✱ <u>point of view</u> - the perspective from which a story is told

✱ <u>first person</u> - a point of view when someone is stating their opinions using words like "I" & "me"

✱ <u>third person</u> - a point of view in which the narrator relates all action in of another person's experience, using pronouns such as "he" or "she."

✱ <u>traditional</u> - words and phrases that are timeless and can still be used today

✱ <u>modern</u> - based on or using the newest information, methods, or technology

✱ <u>theme</u> - the moral, lesson or universal life lesson

✱ <u>pattern of events</u> - actions that are reoccurring and similar

✱ <u>myth</u> - a traditional story that explains some phenomenon and typically involves supernatural beings or events.

✱ <u>culture</u> - characteristics of everyday life shared by people in a particular group, place or time period.

✱ <u>topic</u> - the general subject of a story; the main idea

Revised 2/7/23

Answer Key

1. C

2. B

3. A

4. C

5. C

6. A

7. A

8. B

9. B

10. Stories will vary

11. Answers may vary. Some examples are:

(3rd person omniscient uses words like "Toad" "Mouse" and "his". A 1st person story from the point of view of the Toad should use words such as, "I" or "my". It will similarly have words to describe the mouse as, "he" or "mouse".)