Name: _____ School: _____ Gr: 5 or 6 (next year)

English						Math			
CogAT		**Reading**		**Literature**		**Multiple Choice**		**Numerical Response**	
1	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	31	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	51	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	1	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	31	
2	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	32	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	52	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	2	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	32	
3	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	33	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	53	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	3	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	33	
4	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	34	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	54	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	4	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	34	
5	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	35	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	55	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	5	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	35	
6	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	36	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	56	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	6	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	36	
7	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	37	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	57	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	7	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	37	
8	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	38	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	58	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	38	
9	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	39	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	59	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	39	
10	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	40	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	60	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	40	
11	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	41	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	61	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	11	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	41	
12	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	42	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	62	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	12	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	42	
13	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	43	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	63	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	13	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	43	
14	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	44	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	64	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	14	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	44	
15	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	45	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	65	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	15	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	45	
16	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	46	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	66	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	16	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	46	
17	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	47	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	67	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	17	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	47	
18	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	48	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	68	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	18	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	48	
19	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	49	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	69	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	19	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	49	
20	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	50	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	70	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	20	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	50	
21	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			71	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	21	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
22	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			72	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	22	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
23	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			73	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	23	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
24	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			74	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	24	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
25	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			75	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	25	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
26	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			76	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	26	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
27	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			77	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	27	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
28	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			78	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	28	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
29	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			79	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	29	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		
30	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ			80	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	30	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ		

CogAT

Synonym Replacement: Select the closest meaning to match the underlined word or phrase.

1. DEFICIENCY may mean
   A) lack
   B) excess
   C) quantity
   D) falseness

2. DILIGENT may mean
   A) hardworking
   B) lazy
   C) obsessive
   D) defensive

3. EMBEZZLE may mean
   A) overcome
   B) encumber
   C) educate
   D) steal

4. ENVIOUS may mean
   A) joyful
   B) inquisitive
   C) jealous
   D) previous

5. FATIGUE may mean
   A) increase in height
   B) recede from view
   C) grow weary
   D) become fluid

6. FRET may mean
   A) require
   B) listen
   C) worry
   D) provide

7. GULLIBLE may mean
   A) easily deceived
   B) assailable
   C) stranded
   D) distant

8. HUMID may mean
   A) damp
   B) funny
   C) reheated
   D) rainy

9. INCREDIBLE may mean
   A) extraordinary
   B) uncivilized
   C) believable
   D) sophisticated

10. INDEMNITY may mean
    A) conviction
    B) accusation
    C) exemption
    D) compensation

CogAT

Analogies: Select the best match for each of the following analogies.

11. waterway : channel = fabric : _____
    A) puce
    B) zipper
    C) cotton
    D) stone

12. behavior : furtive = action : _____
    A) evanescent
    B) cerebral
    C) conditioned
    D) covert

13. earth : sun = moon : _____
    A) orbit
    B) sky
    C) star
    D) earth

14. cloud : stratus = sound : _____
    A) murmur
    B) lightning
    C) thunderous
    D) night

15. agnostic : doubt = _____
    A) architect : truth
    B) atheist : denial
    C) fanatic : patience
    D) skeptic : faith

16. smooth : satin = treacle : _____
    A) saccharine
    B) volatile
    C) viscous
    D) brittle

17. window : curtain = _____
    A) door : frame
    B) book : jacket
    C) cpu : cabinet
    D) casing : wire

18. melt : liquid = freeze : _____
    A) ice
    B) condense
    C) solid
    D) crystal

19. forage : food = wildcat : _____
    A) bobcat
    B) game
    C) mountain
    D) oil

20. trucks : fleet = teachers : _____
    A) apple
    B) student
    C) book
    D) faculty

CogAT

Sentence Completion: Select the best match to complete each of the following sentences.

21. Tristan thinks biology is boring, but math is _____.
A) difficult
B) interesting
C) dull
D) easy

22. My favorite holiday is _____ because I love to receive _____.
A) Christmas … presents
B) Thanksgiving … candy
C) New Year's Eve … cookies
D) Halloween … money

23. Cars have _____ parts: the engine, wheels, doors, gears, windows, seats, and more.
A) some
B) a few
C) many
D) a couple of

24. Erin has many friends at school. She is very _____.
A) popular
B) intelligent
C) busy
D) talkative

25. Even though Dana is _____, she has a lot of _____. She believes she can win every race.
A) nervous … confidence
B) brave … courage
C) small … weight
D) excited … energy

26. The invention of the telephone has made communication much _____ than it was before.
A) worse
B) more expensive
C) easier
D) more boring

27. I am _____. Nevertheless, I am _____.
A) poor … happy
B) sad … depressed
C) angry … terrible
D) tired … sleepy

28. In addition to _____, Peter likes to watch _____.
A) movies … television
B) sports … puzzles
C) math … science
D) art … music

29. Despite his _____ personality, Carlos can be rather _____ sometimes.
A) nervous … awkward
B) strange … weird
C) shy … outgoing
D) funny … entertaining

30. Smoking is _____; it can cause many _____ diseases.
A) fun … safe
B) dangerous … harmful
C) smart … positive
D) famous … popular

Reading

Human Microbiome: Your Body Is an Ecosystem
From the American Museum of Natural History

What Is an Ecosystem? Forests, lakes, and caves are ecosystems, and each contains a unique mix of living things, like plants and animals, and non-living things, like air, sunlight, rocks, and water. An ecosystem is a community of living things that interact with each other and with the non-living things in their environment.

You Are an Ecosystem The human body is also an ecosystem. We are home to thousands of kinds of bacteria, viruses, fungi, and other microscopic organisms—trillions of them. There are more microbes living on just your skin right now than there are people on Earth. And there are a thousand times more than that in your gut! Together all the microbes in and on the human body form communities that make up the human microbiome. Like fingerprints, no two human microbiomes are the same. You aren't just an ecosystem—you are a unique ecosystem.

Humans & Microbes Microbes first appeared over 3.5 billion years ago. This makes them the oldest form of life on Earth. Over the past six million years, humans and microbes have coevolved to form complex relationships. Humans need a microbiome to stay healthy, and the microbiome needs environments provided by the human body in order to survive.

Just like the plants and animals in an ocean or a desert, the species that make up a microbiome interact with each other. They rely on these interactions in order to eat, grow, and reproduce. Different species of microbes live in different places in and on our bodies. They are adapted to these environmental conditions, from the cool, dry skin of your knee to the warm, moist darkness inside your mouth.

How Do Scientists Study the Human Microbiome? How do scientists find out which organisms make up a human microbiome? They can do experiments. James Meadows, a researcher at the University of Oregon, placed people in a "clean room": a room as free of microbes as possible. (Microbes are everywhere.) Scientists sealed off the room and sterilized it. They filtered the air to prevent microbes from coming in from the outside. Then they divided the space into two rooms. One stayed empty. People entered the other room, one at a time. After each person left, the researchers took a sample of the air in the room. Scientists repeated the experiment many times, and could always tell which room had been occupied. They could measure bacterial "clouds" in the room—bacteria that had come off the person's body. Because every person's microbiome is unique, they could also identify different people from their bacterial "clouds." Scientists are just beginning to understand what roles these organisms play in human health. Some species benefit us, like gut bacteria that help digest food. Some cause harm, like pathogens that cause disease. Many simply coexist with us—it seems that most species are either benign or beneficial to humans. Scientists call these bacteria commensal (if they are harmless) or mutualistic (if they offer a benefit). Sometimes bacteria that are harmless or beneficial in one place can cause problems in another.

Competition in the Biome Just like organisms in any ecosystem, microorganisms within the microbiome compete with each other for space and resources. They also prevent other organisms from entering the ecosystem. Some of this competition benefits us. For example, a bacteria on our skin called Bacillus subtilis competes with the fungus that causes athlete's foot, preventing the fungus from infecting us.

Scientists are studying how these

microorganisms work in our bodies, and learning about the balance between different bacterial communities. Products like antibacterial hand sanitizers can wipe out all bacteria on a patch of skin, good and bad alike. Antibiotic drugs also destroy helpful bacteria along with their targets. Fungi evolved the ability to produce anti-bacterial chemicals as they competed with bacteria over millions of years of evolution. By studying these fungi, scientists learned how to manufacture these anti-bacterial chemicals and turn them into antibiotic drugs, which have saved millions of lives. At the same time studies suggest that rapidly increasing antibiotic use in the United States has reduced the diversity of our microbiomes.

Being Healthy Means Having a Balanced Microbiome We now understand that a diverse and balanced microbiome is essential for a strong immune system. Some scientists think that infants who lack exposure to microorganisms develop a higher rate of allergies, asthma, eczema, and other health problems. Studies also suggest that the microbiome plays a role in obesity and in conditions like depression.

The microbiome is so important that it is like an additional organ. It is a part of the body that serves vital functions, like the skin or kidneys. We need to preserve ecosystems in nature, so preserving our own ecosystem is important too.

31. What is an ecosystem?
    A) An experiment in which people are placed inside a room that is free from microbes
    B) A species of bacteria that can help protect our skin against fungi and yeast, but can also cause infections and life-threatening diseases.
    C) A community of living things that interact with each other and with non-living things in their environment
    D) A group of scientists who study how microorganisms work within our bodies, and the balance among different bacterial communities.

32. What statement best describes the main idea of this passage?
    A) No two human microbiomes are the same.
    B) The human body is a diverse ecosystem made up of microbes.
    C) Some bacteria cause infections and even life-threatening diseases.
    D) Some scientists think that infants who lack exposure to microorganisms develop more allergies.

33. The author organizes this text into sections with subheadings. What is described in the section under "You are an Ecosystem"?
    A) Microbes in and on the human body
    B) Plants and animals living in the ocean
    C) An experiment in which scientists measure bacterial "clouds"
    D) The effects of antibiotics on our microbiomes

34. What effect do antibiotic drugs have on bacteria?
    A) Antibiotic drugs kill bacteria outside the human body but not inside the human body.
    B) Antibiotic drugs kill harmful bacteria but not helpful bacteria.
    C) Antibiotic drugs kill helpful bacteria but not harmful bacteria.
    D) Antibiotic drugs kill helpful bacteria and harmful bacteria.

35. What information from the text best supports the statement: "Humans and microbes have complex relationships"?
A) Scientists call bacteria that are harmless to humans "commensal."
B) Antibacterial hand sanitizers can wipe out all bacteria on a patch of skin.
C) Microbes are the oldest form of life on Earth, having first appeared over 3.5 billion years ago.
D) Some microbes benefit humans, while other microbes harm humans.

36. One example of how microbes benefit human health is:
A) Gut bacteria helps digest food.
B) Pathogens cause diseases.
C) Fungus causes athlete's foot.
D) Bacterial clouds form around people.

37. It is important to have a diverse and balanced microbiome because:
A) It is necessary for manufacturing antibiotic drugs.
B) It is a way to save millions of lives.
C) It is essential for a strong immune system.
D) It is necessary in preventing babies from developing asthma.

Reading

Different Forms of Water

When you're thirsty, few things feel better than drinking a tall glass of water poured over ice. But as you're drinking, do you realize you are experiencing two very different forms of water, and that each form can be used for totally different jobs?

If you suddenly catch a cold, your parent may give you a cup of steaming hot tea to drink. That steam is a third form of water and has its own properties.

Water is the most common compound on Earth, covering about 70 percent of the planet's surface. Most of that water is in liquid form, sloshing around in the oceans and other bodies of water. Because it's so common, and because it's easy to use for so many different purposes, liquid water is part of our everyday lives. We use water to nourish everything from ourselves to our pets to our yards. Like all liquids, water travels faster and increases in pressure as more of it is pressed through a tighter space. We can see this principle after we brush our teeth, using water flowing from the tap to push the toothpaste down the drain. By increasing the pressure, we use water to clean glasses in a dishwasher and cars in a carwash.

Water is great at cooling things down. To cool off our bodies, we go swimming at the pool on a hot summer day. To cool off our cars and factories, we force water through pipes to keep engines from overheating.

Water can also be a great way to travel. People have used sails, paddles and oars to propel boats through water for thousands of years. In modern times, one gallon of diesel fuel can pull one ton of cargo 59 miles by truck down a highway, 202 miles by train down a railroad track, and 514 miles in a boat through water.

Another traditional use for water is generating power. When water drops quickly in elevation, as over a waterfall, special gears called turbines can be placed inside the stream. Turbines can be used either directly to spin machines like sewing looms, or indirectly to capture that momentum as electricity. America has used this property of falling water to build giant electricity plants, including the ones at Hoover Dam and Niagara Falls.

When water freezes into ice, it becomes hard. Unlike most other frozen liquids, ice is actually less dense than water in its liquid form, which is why ice cubes float. These two properties explain the Antarctic ice pier, which has been constructed at America's McMurdo research station every summer since 1973. Workers pump seawater into a contained area and let it freeze. The pier becomes so sturdy it can support semi-trucks, which transport tons of food and equipment from supply ships to the station.

Ice also cools things down. The National Seal Sanctuary in Britain uses a machine to produce ice for the sea lions, because they fight less when they're cool. Zoos around the world buy ice machines to chill areas for polar bears and penguins. Humans like ice so much that large restaurants and hotels often spend more than $10,000 on a single ice machine.

As the temperature rises, ice melts into water, which boils into steam. Perhaps the most common use of steam is electricity; about 90 percent of all electricity generated in the U.S. comes from steam turbines. Heat to boil the water is generated by many fuels, including coal, natural gas and nuclear fuel.

For thousands of years, farmers have used steam to sterilize their fields and kill weeds and bacteria. You can see steam at work in many buildings and homes, where it is forced through pipes and radiators for heat. You can also see steam at work if your parents cook

vegetables in a steamer.

Because we are constantly surrounded by water, ice and steam, it's easy not to pay attention to them. But all three are really just the same chemical compound that makes life on Earth possible.

38. The three forms of water discussed in the passage are:
A) Liquid water, steam, and pressure
B) Steam, electricity, and liquid water
C) Ice, liquid water, and steam
D) Ice, steam, and pressure

39. What does this passage describe?
A) Different forms and uses of water.
B) Different kinds of weeds that grow in fields.
C) How to cook vegetables using a steamer.
D) The effects of brushing your teeth.

40. What evidence from the passage best supports the conclusion that water is used for many different things?
A) Seals are more likely to fight when they are hot than when they are cool.
B) Water is used for cooling down engines, generating power, and traveling.
C) As the temperature rises, ice melts into water, and water boils into steam.
D) If you catch a cold, you may be give a hot cup of tea to drink.

41. What is one difference between ice and steam?
A) Ice is hot; steam is cold.
B) Ice is liquid; steam is solid.
C) Ice is a gas; steam is liquid.
D) Ice is cold; steam is hot.

42. What is this passage mainly about?
A) The National Seal Sanctuary in Britain
B) The many uses of water, ice and steam
C) An ice pier at America's McMurdo research station
D) How water can be used to generate electricity

43. Choose the answer that best completes the following sentence: "Water covers _____ 70 percent of the earth's surface."
A) approximately
B) accurately
C) exactly
D) barely

44. According to the passage, ice is unlike other frozen liquids because:
A) it melts faster
B) it is colder
C) it is less dense than water in its liquid form
D) it is more dense than water in its liquid form

Reading

Closure in the Darkness
By Rachel Howard

Jordan's girlfriend had broken up with him two weeks ago. He had basically spent the past fourteen days in bed, staring at the ceiling, focusing on the fading glow-in-the-dark stars he had stuck there when he was a kid, wondering why they were still around. His room was beginning to look as if it had been struck by a natural disaster, and his mom had threatened to come in and clean. Luckily it was Christmas break—if he had to go to school and see his ex every day, he didn't know what he would do. Probably combust.

Here was the thing: Alexis had met another guy who went to a different high school. When she'd broken up with Jordan in a Starbucks, she hadn't even cried. Instead, Jordan was the one who had teared up—like a child—and he had had to end the conversation by getting up to leave. He was sure everyone in school knew about this, and so he had decided to stay in his room, alone for the entire winter vacation. He pretended that he had entered a black hole and had never even been involved with Alexis in the first place.

It was working so far. He had gotten through Kafka's entire collected works, something he had been meaning to do for a while now. He was sure that he was going to turn into a cockroach. But that didn't necessarily bother him.

As Jordan contemplated the greenish moon on his ceiling, his little sister Christina banged his bedroom door open and came running into his room.

"EWWW, it really smells in here!" Christina screamed.

Jordan sat up quickly, the blood rushing from his head; he felt immediately faint.

"Christina, get out of here! What are you doing?"

She laughed and began picking up his dirty shirts, strewn over the navy-blue carpet. "Jessica dared me," she said, gesturing toward the doorway. Jessica's little blond head peeked out from the side of the door.

"Sorry," she said, lisping.

"Get out!" Jordan cried.

Their mom came rushing into Jordan's room. "Hey, hey, what's going on here?" she asked. "Oh, wow, Jor, it really smells."

Jordan flopped back on the bed. "Thanks for your feedback," he said.

"Christina, go outside and play," their mother said. As Christina and Jessica ran down the stairs giggling, Jordan's mother sat on his bed.

"Look, Jor, I know you're hurting, but I need to step in here. You've been cooped up for too long. Stop punishing yourself. It's time to get out a bit," she said gently. "Mikey called the house. He said your cell phone has been off for days."

Jordan stared intently at the ceiling, feeling the tears rise. "It died," he said.

"He wants to take you camping," his mother said. "He's coming to pick you up at noon, okay? You're going to Joshua Tree."

A few hours later, Jordan had showered and had a full meal ("with protein!"), and he was sitting in his best friend Mikey's car with the windows down. They pulled into Joshua Tree National Park around four, and set up the "luxury tent" Mikey's dad had gotten him for Christmas. Once it had been built, they sat on

some boulders looking out at the campsite, which was deserted except for a few tents in the far left-hand corner.

A slight breeze drifted over them, and Jordan pulled on a sweatshirt. "Thanks for doing this, Mikey," he said, looking at his friend.

"Of course, brother," Mikey said. "I can't believe Alexis did that to you."

They watched the sun set over the Rocky Mountains. The shadows of the Joshua trees, spiky, thick-rooted, and bizarre, were long and numerous. The campsite, lying in the shadow of the mountains, got cold quickly, and the boys continued to layer with jackets until they decided to build a fire.

Joshua Tree was quiet. There had been no movement from the tents on the other side of the campsite. When Jordan looked up, he saw real stars and a real moon, not the pathetic half-glowing ones in his bedroom.

"Man, I hope my mom is cleaning my room," Jordan said, laughing.

Mikey snorted and pulled out a bag of marshmallows from his backpack. "Want one?" he said, offering it to Jordan.

Jordan reached in and pulled out a handful. "I just don't understand how someone you care about so much can be that unfeeling," he said, shoving a few marshmallows in his mouth. The sticky sweetness made him cough.

"Look, Alexis probably has some other things going on," Mikey said, sucking on a marshmallow. "It likely has nothing to do with you."

Jordan sighed. Somewhere in the distance, a coyote (or a wolf? Jordan hoped it was just a coyote) cried out. "I know that. But it's hard not to take it personally."

"Yeah, of course, man. Of course it is."

Jordan groaned and leaned forward on his knees. "Ugh, I just really don't want to go back to school."

Mikey patted his back.

Jordan frowned and kicked at the dirt. It was so dark where they were, but the darkness felt safe, cathartic somehow. Jordan half-expected to wake up and be an entirely different person—not a cockroach, like in Kafka's novella, The Metamorphosis—just a better version of himself. He looked out at the shadowy world in front of him and noticed a strip of moonlight on the tents on the other side of the campsite. A lamp switched on inside one of them. Jordan started to think about the people in that tent, and he found himself—for the first time in two weeks—wondering about something other than himself and his current situation. He thought that maybe those people were here for the same reasons he was.

Jordan leaned back on the boulder and looked up. Gazing at all those dying gaseous stars, his problems started to fade. He threw his fist in the air and shouted out, almost triumphantly. Mikey, still sitting up, looked down at him and laughed.

45. What happened to Jordan two weeks ago?
A) His room was struck by a natural disaster.
B) He got a job at Starbucks.
C) His girlfriend broke up with him at Starbucks.
D) His girlfriend gave him a Christmas gift.

46. What is this story mainly about?
A) How Jordan begins to get over his girlfriend by going camping with a friend.
B) How Jordan and his sister spend Christmas vacation.
C) The books Jordan reads during Christmas break.
D) Jordan's smelly bedroom.

47. What are the two settings where this story takes place?
A) Jordan's house and his friend Mikey's house.
B) Jordan's bedroom and Joshua Tree National Park.
C) Jordan's house and Starbucks.
D) Starbucks and Joshua Tree National Park.

48. Which conclusion can you draw about how Jordan's mother feels about the breakup and Jordan's camping trip?
A) She can't understand why Jordan is so upset over the breakup, and thinks he should go camping with Mikey.
B) She thinks Jordan is being ridiculous and she does not want him to go camping in the wilderness without an adult.
C) She is angry with Jordan and wants him to go camping with his friend.
D) She understands Jordan is hurt, but thinks camping is a good idea.

49. What evidence from the story supports your answer to the previous question?
A) Jordan's mom came rushing into his room and said, "What's going on here?"
B) Jordan's mom told him that his room smelled really bad and he should go outside.
C) Jordan's mom tells him that she knows he has been hurting, but his friend will be over to take him camping.
D) Jordan's mom tells him that Mikey has been trying to reach him for days.

50. What word best completes the following sentence? "Jordan's cell phone has been off for days, _____Mikey has to call the house phone to get in touch with his friend."
A) therefore
B) after
C) since
D) before

Literature

"To Kill A Mockingbird", Harper Lee

51. Why was Jem's arm broken?
    A) He fell from a tree
    B) Dill fought with him and broke it
    C) Bob Ewell tried to kill him
    D) He injured it while playing football

52. What is a mockingbird?
    A) A bird that makes fun of people
    B) A bird of prey
    C) A harmless songbird
    D) A parasitic bird who steals other birds' eggs

53. What is a finch?
    A) Nothing; just a surname
    B) A type of tree
    C) A type of bird
    D) An architectural component on a building

54. What was going on during the time of this story?
    A) World War I
    B) Great Depression
    C) World War II
    D) Civil Rights Movement

55. What is Scout's socioeconomic status?
    A) She is dirt-poor
    B) She is blue collar
    C) She is middle class
    D) She is wealthy

56. What is the major focus of the first few chapters of the book?
    A) The mystery of Boo Radley
    B) The crimes leading up to the trial
    C) Atticus's moral character
    D) Scout's problems at school

57. At the beginning of the book, what does Scout's description of her school's social environment demonstrate?
    A) The Ewells are initially reviled for their poverty and vulgarity
    B) The town of Maycomb has nice citizens
    C) Atticus is kind to the poor, including poor students
    D) The school environment is progressive despite the surroundings

58. What does Aunt Alexandra value?
    A) Justice
    B) Family
    C) Conservatism
    D) Pride

59. What is the central piece of evidence used by Atticus during the trial?
    A) The allegation that Bob is racist
    B) The depravity of the Ewells' living conditions
    C) The differences in handedness
    D) The presence of the lynch mob

60. What do the kids initially believe about Boo?
    A) They think he is a ghost
    B) They think he is dead
    C) They think he is being abused by his brother
    D) They think he might be crazy

61. What does Miss Caroline's approach demonstrate about the educational system at the time?
    A) That rigidity in learning is effective in teaching
    B) That all students should be treated equal, regardless of class
    C) Following the rules leads to success
    D) The education system fails to account for the needs of individual students

62. How does Atticus define courage?
A) Not giving in to fear, no matter how great the fear is
B) Choosing the right battles and forgetting the wrong ones
C) Committing to a cause despite an almost certain risk of failure
D) Facing up to lethal dangers with equally lethal weapons

63. What is the biggest threat to Maycomb?
A) Outsiders
B) The weather
C) The Ewells
D) Maycomb's own citizens

64. Why is Atticus so forgiving of Mrs. Dubose?
A) He knows she didn't mean to be racist
B) He thinks Jem was wrong to destroy the camellias
C) He thinks everyone deserves forgiveness
D) He can see that a person can contain both good and bad

65. What primary role does Calpurnia play in the children's lives?
A) Disciplinarian
B) Token black character
C) Mother figure
D) Teacher

66. What drives Bob Ewell's desire for revenge?
A) A sense of injustice
B) Wounded pride
C) Desire to prove a point
D) Defending Mayella's honor

67. Why is Bob Ewell's attack so surprising?
A) The reader hasn't been made aware that Ewell is vengeful
B) Ewell had been arrested earlier, making an attack unlikely
C) Jem and Scout have been thrown off guard because of Cecil Jacob's pranks
D) Ewell's threats had not been taken seriously

68. How does Atticus behave in public?
A) Just as he behaves in private
B) Better than he behaves in private
C) Worse than he behaves in private
D) In totally opposite ways

69. Why does Atticus criticize the children's attempts to lure Boo out?
A) He thinks they are psychologically damaging Boo
B) He warns them that Boo is a dangerous man
C) He says that Boo has a right to do whatever he likes, including staying in
D) He thinks trying to get him to come out is an unproductive use of time

70. In addition to race conflict, what other conflict is present in the book?
A) Class
B) Education
C) Gender
D) All of the above

71. What kind of perspective is the narrator, Scout, writing from?
A) That of an adult
B) That of a child
C) Both an adult and a child
D) Neither

72. What is Mayella's most likely feeling at being questioned on the stand by Atticus?
A) Resentment and insecurity
B) Anger and indignation
C) Fear and anxiety
D) Despair and inferiority

73. Why does Jem feel so disillusioned?
A) He believed in the court system
B) He believed in the goodness of the people in Maycomb
C) He believed in his father's intellectual prowess
D) He believed in America

74. Why is Aunt Alexandra so particular?
A) She wants to preserve the honor of the family
B) She is snobby
C) She doesn't want the children to come to danger
D) She is very sensitive

75. What is Atticus's rule for judging others?
A) Judge only those who are deserving of judgment
B) Racists and others who discriminate are evil people
C) Don't judge anyone unless you've walked in their shoes
D) One should defend one's family and honor above all else

76. What kind of clause is the underlined portion?
When I asked Atticus, Atticus was so amused I was rather annoyed, but he said he wasn't laughing at me.
A) Dependent
B) Independent
C) Both
D) Neither

77. What is the underlined portion an example of?
According to Miss Stephanie Crawford, however, Atticus was leaving the post office when Mr. Ewell approached him, cursed him, spat on him, and threatened to kill him.
A) Parallel sentence construction
B) Excessive use of adjectives
C) Pronoun-antecedent agreement
D) Subject-verb disagreement

78. What is the following an example of?
Which reminded me that we were missing nearly all of Mr. Gilmer's cross- examination.
A) Missing commas
B) Run-on sentence
C) Sentence fragment
D) Aside

79. How do the em dashes in this sentence function?
If I had ever thought about it, I would have known that Calpurnia was of mature years — Zeebo had half-grown children — but then I had never thought about it.
A) As colons
B) As commas
C) As parentheses
D) As blank spaces

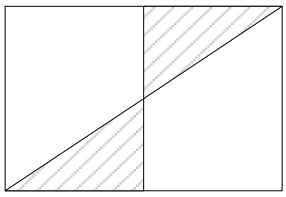
80. Which part of speech is the underlined word?
Roaring, the house collapsed; fire gushed everywhere, followed by a flurry of blankets from men on top of the adjacent houses, beating out sparks and burning chunks of wood.
A) Adjective
B) Adverb
C) Preposition
D) Conjunction

Multiple Choice (30 Questions)

1. In how many ways can 101 be expressed as the sum of two integers, both greater than zero, with the second integer greater than the first?
   A) 50
   B) 51
   C) 101
   D) 102

2. In a class of 30 students, the number of boys is 20% of the number of girls. How many girls are in the class?
   A) 10
   B) 15
   C) 20
   D) 25

3. What fraction of the figure is shaded?



   A) $\frac{1}{2}$
   B) $\frac{1}{4}$
   C) $\frac{3}{8}$
   D) $\frac{5}{16}$

4. Suppose 120 students out 150 passed a math exam. What percentage of the students failed?
   A) 35%
   B) 30%
   C) 25%
   D) 20%

5. There are 2,382 paintings in an art museum. The museum has 124 rooms. Which is a reasonable estimate for the number of paintings in each room?
   A) 10
   B) 20
   C) 30
   D) 200

6. Jack has 18 toy cars with the total weight of 4.2 ounces.

   Which of the following expressions has a value that is the total weight, in ounces, of Jack's 6 toy cars?
   A) 1.4
   B) 2.1
   C) 2.4
   D) 2.5

7. The table below shows the populations of 5 different cities.

City Populations

City	Population
Seaside	20,001
Oceanside	20,002
Lakeside	20,003
Mountainside	20,004
Riverside	20,005

   What is the average population of these five cities?
   A) 20,001
   B) 20,002
   C) 20,003
   D) 20,004

8. The digits in the number "1998" are each cycled separately and then numbered as shown.
1. 9981
2. 9819
3. 8199
…
If the pattern continues in this way, what number will appear in front of 1998?
A) 3
B) 5
C) 10
D) 16

9. What is the probability that a student in Ms. Washington's class completed the test in 30 minutes?

Time to Complete Test	Number of Students
38 minutes	7
36 minutes	3
34 minutes	1
32 minutes	6
30 minutes	10

A) $\frac{1}{20}$
B) $\frac{10}{17}$
C) $\frac{10}{27}$
D) $\frac{10}{30}$

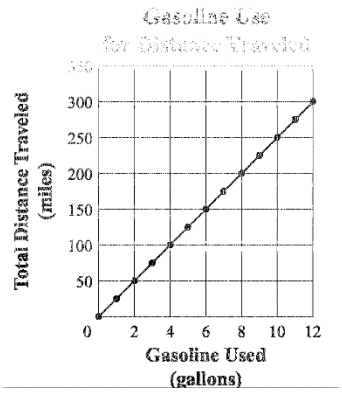
10. Janet has a box of 30 cards. There are 15 blue cards and 15 green cards in the box. Janet pulls out a card, records the color and returns the card to the box. After pulling 10 times, she has recorded 6 blue cards and 4 green cards.

Which statement describes whether this result is reasonable?
A) It is reasonable because both 6 and 4 are close to 5.
B) It is reasonable because 6 is more than 4.
C) It is not reasonable because she will always get 5 blue cards and 5 green cards.
D) It is not reasonable because she did not pick enough cards.

11. Last year 9.9×10^5 people attended the New York State Fair. What is this number expressed in standard form?
A) 9,900
B) 99,000
C) 990,000
D) 9,900,000

12. How many numbers from 12 to 21 are divisible by 3?
A) 4
B) 5
C) 7
D) 8

13. The graph below shows the relationship between gasoline used and total distance traveled for Katya's car.



Based on this graph, what is the number of miles traveled with 7 gallons?
A) 125 miles per gallon
B) 150 miles per gallon
C) 175 miles per gallon
D) 200 miles per gallon

14. When it is 3:00 p.m. in L.A, it is 6:00 p.m. in New York. Stefan's flight departed at 6:00 a.m. local L.A. time and arrived at 4:00 p.m. local New York time. How long, in hours, was his flight?
A) 5
B) 9
C) 13
D) 7

15. Roberto had \$20. He bought a soccer ball that cost m dollars. He now has less than \$5 left. Which inequality represents this situation?
A) $20 - m < 5$
B) $20 - m > 5$
C) $m - 20 < 5$
D) $m - 20 > 5$

16. Ms. Kelly is offering a video presentation to her class. There are twice as many girls as boys. Everyone, including Ms. Kelly, is seated. Which of the following numbers may be the number of seats?
A) 20
B) 24
C) 25
D) 32
E) 33

17. Jim, Jack, and Rich have decided to use a code to message each other. They started by encoding their own names. From the list below, which choices are the ones that represent the codes for their names?

1) ⊗ ∪ ▽
2) ⊗ ◇ ⊂ ∪
3) ⊗ ⊂ ◇ ⊥
4) 人 W ◇ \$
5) ☾ ∩ ⊂ △
6) ⊗ W ✠

A) 1, 2, and 3
B) 1, 2, and 4
C) 1, 3, and 5
D) 2, 5, and 6
E) 3, 4, and 6

18. A picture of footprints shown on the left was rotated as shown on the right.

Which footprints are missing in 2nd picture above?

A) 

B) 

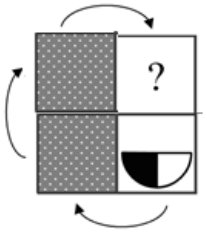
C) 

D) 

E) 

19. 

Helena turns the card over about its left, top, and then bottom edge, as shown below.



What does Helena see?

A) 

B) 

C) 

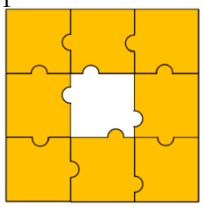
D) 

E) 

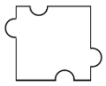
20. If we add the triple of a number to five times its double we could obtain:
A) 8
B) 32
C) 80
D) 91
E) 95

21. Two numbers can both be divided evenly into groups of 3 as well as into groups of 4. The difference between them can be:
A) 1
B) 7
C) 18
D) 32
E) 36

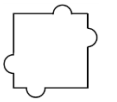
22. The picture shows the back side of the puzzle.



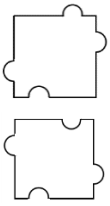
A)



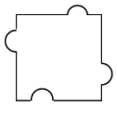
B)



C)

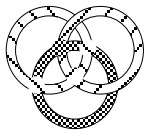


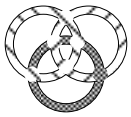
D)

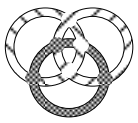


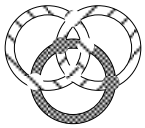
E)

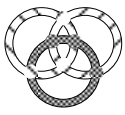
23. The Borromean Rings are three rings linked in such a way that: if any of the three rings is cut, the other two are no longer linked. Which of the answer choices represents the Borromean Rings?

A 

B 

C 

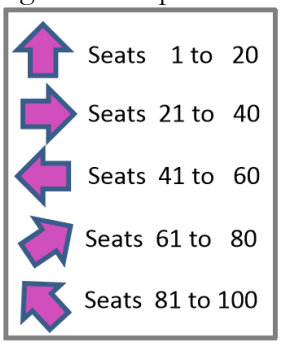
D 

E 

24. Zoe has two cards with numbers on both sides of the cards – four numbers in total. The sum of the four numbers equals 32; the sum of the two numbers on the first card is equal to the sum of the two numbers on the second card. What are the hidden numbers?

A) 8 and 7
B) 8 and 6
C) 11 and 4
D) 9 and 6
E) 10 and 5

25. George and his father go to the circus. Their seat numbers are 60 and 61. Which signs will help them to locate their seats?



Which way should they go?

A) 

B) 

C) 

D) 

E) 

26. In December Tom-the-cat slept for exactly 3 weeks. Which calculations should we do in order to find how many minutes he stayed awake during this month?
A) $(31 - 7) \times 3 \times 24 \times 60$
B) $(31 - 7 \times 3) \times 24 \times 60$
C) $(30 - 7 \times 3) \times 24 \times 60$
D) $(31 - 7) \times 24 \times 60$
E) $(31 - 7 \times 3) \times 24 \times 60 \times 60$

27. Use exactly one time each of the numbers 2, 4, 5, and the operators + and ×, as well as any number of parentheses. Which of the following results cannot be obtained?
A) 13
B) 14
C) 28
D) 30
E) 38

28. The year 2012 is a leap year, that means there are 29 days in February. On the 15th of March 2012, the ducklings of my grandfather are 20 days old. When did they hatch from their eggs?
A) on 19th of February
B) on 21th of February
C) on 23rd of February
D) on 24th of February
E) on 26th of February

29. Together with the piece in the picture below,

which of the 5 pieces in the answers fits to form a rectangle?

A) 

B) 

C) 

D) 

E) 

30. What number must be placed in the box to make the equality true?
$12 \times 4 = \square \times 3$
A) 3
B) 4
C) 6
D) 16
E) 24

Numerical Response (20 Questions)

31. Find the value of A.
$\frac{54}{A-1} = 2 - \frac{7}{8}$

32. $15 \div (3 \times 4 - 7) =$

33. 2.5% of 80 =

34. Express the fraction as decimal:
$5\frac{2}{5} =$

35. Find the value of A.
$\frac{7}{12} = \frac{A}{96}$

36. Susan drives 114 miles in 2 hours. If she keeps going at the same rate, how many hours will it take her to go the remaining 285 miles of her trip?

37. You'd like to have a rectangular garden with area 24 ft^2. You have a space 6 ft long for the garden. How many feet does the fencing require?

38. How many 2-digit numbers have digits that differ by 7?

39. Wanda's birthday cake weighs ⅗ of a pound more than ⅗ of the cake. How many pounds does the whole cake weigh?

40. What is the difference between the smallest 5-digit odd number and the largest 4-digit even number?

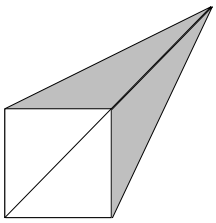
41. In a chocolate store, one chocolate costs $3. One day the store had a deal: "Buy two and get a third one free" and Adam decided to take 49 chocolates. How many dollars did he pay for the chocolates?

42. How many pairs of even two-digit numbers have a difference equal to 50?

43. The points A, B, C, D, E and F lie on a straight line in that order. We know that $AF = 35$, $AC = 12$, $BD = 11$, $CE = 12$ and $DF = 16$. What is the distance BE?

44. Write all the numbers from 1 to 20 in a row and obtain the 31-digit number **12345678910111213141516171819 20**. Then delete 24 of the 31 digits, so that the remaining number is as large as possible. What is the number?

45. The diagonal of a square with area 49 is extended so as to double its length. What is the shaded area?



46. 66 cats signed up for the contest MISS CAT. After the first round 21 cats were eliminated because they failed to catch a mouse. Of the remaining cats, 27 had stripes and 32 had one black ear. All striped cats with one black ear got to the final. What is the minimum number of finalists?

47. Ann and Bill participate in a math reality show. Each of them is secretly given one positive integer. They know that their numbers are two consecutive numbers (for instance, Ann's number is 7, Bill's number is 6). They know only their own number, and they have to guess the number of the other person. Ann and Bill have the following discussion:
Ann to Bill: "I do not know your number".
Bill to Ann: "I do not know your number".
Ann to Bill: "Now I know your number! It is a factor of 20."
What is Ann's number?

Question set [**48 - 50**]

A car leaves point ***A*** at the same time as a motorcycle leaves point ***B*** traveling toward each other. The car travels at a speed that is 10 mph higher than the speed of the motorcycle and they meet after ***t*** hours. If the car would travel at the same speed as the motorcycle they would meet 45 minutes later than ***t*** hours. If the motorcycle would travel at the same speed as the car, they would meet 30 minutes earlier than ***t*** hours.

48. How many miles can the car travel in an hour?

49. Find the value for ***t***.

50. How many miles are A and B apart?