

Comprehensive Assessment - Answer Key

For Ages 8-10

[LOGIC]

1. Which one doesn't belong with planets? Saturn, Jupiter, Mercury, Sun

Answer: Sun

Explanation: Sun doesn't belong with planets

[READING]

2. Complete the sentence: The detective will ____ the mysterious case.
Choose from: examine, solve, investigate

Answer: investigate

Explanation: The correct answer is 'investigate'

[READING]

Story: Reading Passage

3. The annual Solar Car Challenge brought together teams from elementary schools across the state. Each team had to design and build a car powered entirely by solar energy. Team Phoenix from Oakwood Elementary consisted of four students: Elena, the engineer; James, the electrician; Maya, the designer; and Carlos, the strategist. They spent three months designing their car, testing different solar panel configurations, and optimizing the weight distribution. Their car, nicknamed 'Sunburst,' featured lightweight materials and an aerodynamic design. On race day, Sunburst performed excellently in the morning when the sun was bright, but the team had also prepared for cloudy conditions by installing a more efficient battery system. Although they didn't win first place, their innovative battery backup system earned them the 'Most Creative Solution' award. The experience taught them that in engineering, there's always more than one way to solve a problem. Question: What roles did each team member have?

Answer: Elena was engineer, James electrician, Maya designer, Carlos strategist

Explanation: The answer can be found in the story: Elena was engineer, James electrician, Maya designer, Carlos strategist

[READING]

Story: Reading Passage

4. To celebrate the 50th anniversary of Harbor Elementary School, the principal announced a special time capsule project. Each grade level was asked to contribute items that represented their generation for future students to discover. The fifth-grade class, led by student council president Ashley, took on the challenge of organizing the entire project. They surveyed students across all grades to determine what items best represented life in the 2020s. The collection included a smartphone (no longer working), popular books, music on USB drives, photos of electric cars, and handwritten letters describing daily life during their time. Ashley's team also created a detailed inventory and explanation of each item's significance. They researched proper preservation techniques and worked with the local historical society to ensure the time capsule would remain intact for the next 50 years. The burial ceremony brought together current students, alumni, and community members, creating a bridge between past, present, and future generations. Question: Who did they work with to ensure proper preservation?

Answer: the local historical society

Explanation: The answer can be found in the story: the local historical society

[LOGIC]

5. If some students are athletes and all athletes are hardworking, what can we say about some students?

Answer: they are hardworking

Explanation: Answer: they are hardworking

[MATH]

6. $45 + 96 = \underline{\hspace{2cm}}$

Answer: 141

Explanation: $45 + 96 = 141$

[READING]

Story: Reading Passage

7. Alex wanted to win the school science fair. He decided to create a volcano that would erupt using baking soda and vinegar. First, he built a mountain out of clay around a plastic bottle. Then he painted it to look realistic with brown and gray colors. On the day of the fair, Alex mixed the baking soda and vinegar inside the bottle. The mixture bubbled up and flowed down the sides like real lava. His project impressed the judges because he could explain exactly why the chemical reaction happened. Alex won second place and learned that understanding science is just as important as having a good presentation. Question: What did Alex use to make his volcano erupt?

Answer: baking soda and vinegar

Explanation: The answer can be found in the story: baking soda and vinegar

[MATH]

8. $6 \div 3 = \underline{\hspace{2cm}}$

Answer: 2

Explanation: $6 \div 3 = 2$

[READING]

Story: Reading Passage

9. The annual Solar Car Challenge brought together teams from elementary schools across the state. Each team had to design and build a car powered entirely by solar energy. Team Phoenix from Oakwood Elementary consisted of four students: Elena, the engineer; James, the electrician; Maya, the designer; and Carlos, the strategist. They spent three months designing their car, testing different solar panel configurations, and optimizing the weight distribution. Their car, nicknamed 'Sunburst,' featured lightweight materials and an aerodynamic design. On race day, Sunburst performed excellently in the morning when the sun was bright, but the team had also prepared for cloudy conditions by installing a more efficient battery system. Although they didn't win first place, their innovative battery backup system earned them the 'Most Creative Solution' award. The experience taught them that in engineering, there's always more than one way to solve a problem. Question: What award did Team Phoenix receive?

Answer: Most Creative Solution

Explanation: The answer can be found in the story: Most Creative Solution

[READING]

10. Complete the sentence: The lecture was _____ and informative. Choose from: interesting, captivating, engaging

Answer: engaging

Explanation: The correct answer is 'engaging'

[MATH]

11. $98 - 98 = \underline{\hspace{2cm}}$

Answer: 0

Explanation: $98 - 98 = 0$

[MATH]

12. Jack has 9 groups of marbles with 4 marbles in each group. How many marbles does Jack have?

Answer: 36

Explanation: Answer: 36

[MATH]

13. $16 \div 2 = \underline{\hspace{2cm}}$

Answer: 8

Explanation: $16 \div 2 = 8$

[LOGIC]

14. Complete the pattern:

(8) (11) (14) (17) - $\underline{\hspace{2cm}}$

Answer: 20

Explanation: The pattern skips by 3, so the next number is: 20

[LOGIC]

15. If the pattern is: Monday-1, Tuesday-2, Wednesday-3, what number comes with Friday?

Answer: 5

Explanation: Answer: 5

[READING]

16. Which word means the same as 'investigate'? Choose from: ignore, avoid, examine

Answer: examine

Explanation: 'investigate' means the same as 'examine'

[MATH]

17. $57 + 32 = \underline{\hspace{2cm}}$

Answer: 89

Explanation: $57 + 32 = 89$

[LOGIC]

18. Complete the pattern:

(2) (7) (12) (17) - ____

Answer: 22

Explanation: The pattern skips by 5, so the next number is: 22

[READING]

19. Complete the sentence: The committee will ____ the proposal carefully.
Choose from: evaluate, review, examine

Answer: evaluate

Explanation: The correct answer is 'evaluate'

[MATH]

20. $10 - 4 =$ ____

Answer: 6

Explanation: $10 - 4 = 6$

[LOGIC]

21. Complete the pattern:

(11) (19) (27) (35) - ____

Answer: 43

Explanation: The pattern skips by 8, so the next number is: 43

[LOGIC]

22. Which one doesn't belong with geometric_shapes? circle, loud, pentagon, rectangle

Answer: loud

Explanation: loud doesn't belong with geometric_shapes

[LOGIC]

23. Complete the pattern:

$$\textcircled{4} \quad \textcircled{8} \quad \textcircled{16} \quad - \quad \underline{\hspace{1cm}}$$

Answer: 32

Explanation: The pattern multiplies by 2, so the next number is: 32

[READING]

24. Which word means the same as 'diminish'? Choose from: decrease, increase, grow

Answer: decrease

Explanation: 'diminish' means the same as 'decrease'

[READING]

Story: Reading Passage

25. To celebrate the 50th anniversary of Harbor Elementary School, the principal announced a special time capsule project. Each grade level was asked to contribute items that represented their generation for future students to discover. The fifth-grade class, led by student council president Ashley, took on the challenge of organizing the entire project. They surveyed students across all grades to determine what items best represented life in the 2020s. The collection included a smartphone (no longer working), popular books, music on USB drives, photos of electric cars, and handwritten letters describing daily life during their time. Ashley's team also created a detailed inventory and explanation of each item's significance. They researched proper preservation techniques and worked with the local historical society to ensure the time capsule would remain intact for the next 50 years. The burial ceremony brought together current students, alumni, and community members, creating a bridge between past, present, and future generations. Question: How did the students decide what to include in the time capsule?

Answer: they surveyed students across all grades

Explanation: The answer can be found in the story: they surveyed students across all grades

[LOGIC]

26. Complete the pattern:

$$\textcircled{1} \quad \textcircled{5} \quad \textcircled{6} \quad - \quad \underline{\hspace{1cm}}$$

Answer: 11

Explanation: Each number is the sum of the previous numbers, so the next number is: 11

[READING]

27. Which word means the same as 'reluctant'? Choose from: unwilling, eager, excited

Answer: unwilling

Explanation: 'reluctant' means the same as 'unwilling'

[MATH]

28. $28 + 78 = \underline{\hspace{2cm}}$

Answer: 106

Explanation: $28 + 78 = 106$

[MATH]

29. $17 + 5 = \underline{\hspace{2cm}}$

Answer: 22

Explanation: $17 + 5 = 22$

[READING]

30. Complete the sentence: The novel was _____ by readers worldwide.
Choose from: loved, appreciated, enjoyed

Answer: loved

Explanation: The correct answer is 'loved'

[LOGIC]

31. Complete the pattern:



Answer: [RECTANGLE]

Explanation: The pattern repeats [TRIANGLE] - [OVAL] - [STAR] - [RECTANGLE], so the next item is: [RECTANGLE]

[READING]

Story: Reading Passage

32. The coding club at Valley Elementary noticed that many elderly residents in their community struggled with using modern technology. Club president Malik proposed creating a program to help bridge this digital divide. The twelve-member club developed a series of simple tutorial videos explaining how to use smartphones, video calling apps, and online shopping platforms.

They collaborated with the local senior center to organize weekly workshops where students would teach elderly participants one-on-one. The program was so successful that other schools in the district requested copies of the tutorials. Within six months, over 100 senior citizens had learned to use technology more confidently. The project earned the coding club a state-wide recognition award for community service. Most importantly, lasting friendships formed between the young tutors and their elderly students, proving that technology can bring different generations together rather than divide them. Question: What unexpected outcome resulted from the program?

Answer: lasting friendships formed between tutors and students

Explanation: The answer can be found in the story: lasting friendships formed between tutors and students

[LOGIC]

33. Which one doesn't belong with continents? Asia, North America, South America, Brazil

Answer: Brazil

Explanation: Brazil doesn't belong with continents

[LOGIC]

34. A farmer has 15 sheep. All but 9 run away. How many sheep are left?

Answer: 9

Explanation: Answer: 9

[MATH]

35. $5 \times 6 = \underline{\hspace{2cm}}$

Answer: 30

Explanation: $5 \times 6 = 30$

[MATH]

36. $98 - 9 = \underline{\hspace{2cm}}$

Answer: 89

Explanation: $98 - 9 = 89$

[LOGIC]

37. If it's true that 'All roses are flowers' and 'Some flowers are red', can we conclude that 'Some roses are red'?

Answer: no

Explanation: Answer: no

[LOGIC]

38. Which one doesn't belong with parts_of_speech? noun, verb, story, adverb

Answer: story

Explanation: story doesn't belong with parts_of_speech

[READING]

39. Which word means the same as 'elaborate'? Choose from: detailed, plain, simple

Answer: detailed

Explanation: 'elaborate' means the same as 'detailed'

[MATH]

40. In the morning, 8 children came to the playground. In the afternoon, 14 more children joined them. How many children were at the playground in total?

Answer: 22

Explanation: Answer: 22

[MATH]

41. A garden has 4 rows of flowers. Each row has 9 flowers. How many flowers are in the garden?

Answer: 36

Explanation: Answer: 36

[MATH]

42. $8 \div 4 = \underline{\hspace{2cm}}$

Answer: 2

Explanation: $8 \div 4 = 2$

[MATH]

43. The library had 56 books. They lent out 33 books to students. How many books remain on the shelves?

Answer: 23

Explanation: Answer: 23

[LOGIC]

44. A train leaves at 2:00 PM and takes 45 minutes to reach its destination. What time does it arrive?

Answer: 2:45 PM

Explanation: Answer: 2:45 PM

[READING]

Story: Reading Passage

45. Mrs. Patterson's prize-winning vegetable garden was being mysteriously damaged every night. Plants were being eaten, and holes were appearing throughout the garden beds. The neighborhood was puzzled, and some people suspected vandalism. Ten-year-old Zoe, who lived next door, decided to solve the mystery using scientific observation. She set up a camera with night vision capabilities and recorded the garden for several nights. To everyone's surprise, the footage revealed a family of raccoons that had been visiting the garden nightly. The raccoons were attracted to the sweet corn and ripe tomatoes. Instead of being angry, Mrs. Patterson was delighted to learn about her nocturnal visitors. She worked with Zoe to create a separate feeding area away from her vegetable garden, providing the raccoons with appropriate food while protecting her crops. The solution satisfied both the raccoons and the gardener, demonstrating that understanding animal behavior can lead to peaceful coexistence. Question: What scientific method did Zoe use to solve the mystery?

Answer: observation with night vision camera recording

Explanation: The answer can be found in the story: observation with night vision camera recording

[MATH]

46. $10 \times 7 = \underline{\hspace{2cm}}$

Answer: 70

Explanation: $10 \times 7 = 70$

[MATH]

47. $2 \times 8 = \underline{\hspace{2cm}}$

Answer: 16

Explanation: $2 \times 8 = 16$

[MATH]

48. $54 - 1 = \underline{\hspace{2cm}}$

Answer: 53

Explanation: $54 - 1 = 53$

[LOGIC]

49. Every morning, Jake walks to school. Today is Monday morning. What will Jake do?

Answer: walk to school

Explanation: Answer: walk to school

[LOGIC]

50. Sarah has more books than Tom. Tom has more books than Lisa. Lisa has 5 books. Tom has 8 books. How many books might Sarah have?

Answer: more than 8

Explanation: Answer: more than 8