Menu Print

Name_____ Date_____ Class _____

CHAPTER 24 TAKS TEST PREPARATION FOR MATH IN SCIENCE

# *Math Mini-Test* TEKS

## Section 1

**1** It takes Earth 23 hours, 56 minutes to rotate once on its axis. How long does it take Earth to rotate 3 times on its axis?

**A** 72 hours, 12 minutes

**B** 71 hours, 8 minutes

**C** 71 hours, 48 minutes

**D** 69 hours, 56 minutes

**2** A tree measuring 6 cm tall was planted. It grew 1.5 cm each year. Which expression gives the height after $y$ years?

**F** $1.5 + 6y$

**G** $6 + 1.5y$

**H** $(6 + 1.5)y$

**J** $6 + 1.5 + y$

**3** A day on Jupiter is only 9.9 hours long. A day on Earth is about 24 hours long. How much longer is a day on Earth?

**A** 10.1 hours

**B** 2.42 hours

**C** 33.9 hours

**D** 14.1 hours

**4** Julie is given a book about the winter solstice. That day, she reads half of the pages in the book. The next day, she reads half of the pages that are left. On the third day, she reads half of the pages that remain. Julie continues reading the book in this manner for five days. How much of the book is left for Julie to read?

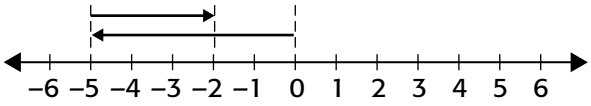
**F** $\frac{31}{32}$

**G** $\frac{1}{32}$

**H** $\frac{1}{64}$

**J** $\frac{1}{16}$

**5** Write the subtraction problem shown on the number line below.




**A** $5 - (-3)$

**B** $3 - (-5)$

**C** $+5 - 3$

**D** $-5 - (-3)$

STOP

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# Answer Key and TAKS Doctor for Mini-Tests

## Section 1

| Answers | TEKS Correlation | TAKS Objectives |
|---|---|---|
| **1** B | M 7.4A | 2 |
| **2** G | M 7.2F | 1 |
| **3** D | M 7.2B | 1 |
| **4** G | M 7.4C | 2 |
| **5** D | M 7.5A | 2 |


*The following TAKS questions have been diagnosed by the TAKS Doctor. Find out what might be causing your "ailing" answers. The TAKS Doctor will see you now!*

**Item 3** *asks students to determine how much longer a day on Earth is than a day on Jupiter.*

**A** **Incorrect.** This answer is found by assuming that there are only 20 hours in an Earth day (20 h − 9.9 h = 10.1 h). However, there are 24 hours in each Earth day.

**B** **Incorrect.** This answer is reached by dividing 24 hours by 9.9 hours. This would be the way to find out how many times longer an Earth day is than a Jupiter day, but the question does not ask for this information.

**C** **Incorrect.** This answer is reached by finding the sum of 24 and 9.9. However, the question asks for the difference, not the sum.

**D** **Correct.** A day on Earth is 24 hours long. Therefore, 24.0 h − 9.9 h = 14.1 h.

**Item 4** *asks students to determine the fifth number of a sequence.*

**F** **Incorrect.** This is the correct answer for how much of the book she has read, not the answer for how much of the book she has left. If she had read $\frac{32}{32}$, she would have finished the book. She has $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{32}$ of the book left to read. $\frac{32}{32} - \frac{1}{32} = \frac{31}{32}$

**G** **Correct.** On the fifth day Julie has $\frac{1}{2}$ of $\frac{1}{2}$ of $\frac{1}{2}$ of $\frac{1}{2}$ of $\frac{1}{2}$ of the book left to read. This can be written as $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{32}$.

**H** **Incorrect.** This is the correct answer for how much of the book she would have left to read on the sixth day. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{64}$

**J** **Incorrect.** This is the correct answer for how much of the book she had left to read on the fourth day. $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{16}$