



COLLEGE ENTRANCE EXAM PRACTICE

FOCUS ON SAT MATHEMATICS SUBJECT TESTS

The SAT Mathematics Subject Tests assess knowledge from course work rather than ability to learn. The Level 1 test is meant to be taken by students who have completed two years of algebra and one year of geometry, and it tests more elementary topics than the Level 2 test.



You will need to use a calculator for some of the problems on the SAT Mathematics Subject Tests. Before test day, make sure that you are familiar with the features of the calculator that you will be using.

You may want to time yourself as you take this practice test. It should take you about 8 minutes to complete.

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1. For what value of c will $3x^2 - 2x + c = 0$ have exactly one distinct real root?
- (A) $-\frac{2}{3}$
(B) $-\frac{1}{3}$
(C) 0
(D) $\frac{1}{3}$
(E) $\frac{2}{3}$
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2. If m and n are real numbers, $i^2 = -1$, and $(m - n) - 4i = 7 + ni$, what is the value of m ?
- (A) -4
(B) -3
(C) 1
(D) 3
(E) 4
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3. If $x^2 - 5x + 6 = (x - h)^2 + k$, what is the value of k ?
- (A) $-\frac{25}{4}$
(B) $-\frac{5}{2}$
(C) $-\frac{1}{4}$
(D) 0
(E) 6
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4. What is the solution set of $y^2 - 2y \leq 3y + 14$?
- (A) $y \geq -2$
(B) $y \leq 7$
(C) $y \leq -2$ or $y \geq 7$
(D) $-7 \leq y \leq 2$
(E) $-2 \leq y \leq 7$
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5. Which of the following is a factor of $(a - 1)^2 - b^2$?
- (A) $a + b - 1$
(B) $a - b$
(C) $a - 1$
(D) $a - b + 1$
(E) $1 - b$
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6. If $z = 5 - 4i$ and $i^2 = -1$, what is $|z|$?
- (A) 1
(B) 3
(C) 9
(D) $\sqrt{41}$
(E) $\sqrt{42}$