

Math Level 2 SAT Practice Test 18

15. If  $\log_3 2 = x$ , then  $x =$
- (A) 0.27  
(B) 0.63  
(C) 0.89  
(D) 1.2  
(E) 1.7
16. If  $f(x) = 3x - 6$ , and if  $g(f(x)) = x$ , then  $g(x) =$
- (A)  $\frac{1}{3x-6}$   
(B)  $\frac{1}{6x-3}$   
(C)  $6 - 3x$   
(D)  $\frac{x}{3} + 2$   
(E)  $-\frac{x}{3} + 2$
17. Where defined,  $\frac{\cot x}{\csc x} =$
- (A)  $\sin x$   
(B)  $\cos x$   
(C)  $\tan x$   
(D)  $\sin x \csc x$   
(E)  $\frac{1}{\sin x}$
18. What is the area of a right triangle with an angle of  $58^\circ$  and with a shorter leg of 5?
21. In the coordinate plane, the graph of which of the following lines is perpendicular to the graph of line  $y = \frac{3}{2}x + 1$ ?
- (A)  $y = \frac{3}{2}x - 1$   
(B)  $y = \frac{3}{4}x + 1$   
(C)  $y = \frac{3}{4}x - 1$   
(D)  $y = -\frac{2}{3}x + 2$   
(E)  $y = -\frac{3}{2}x - 1$
22. If  $x = \sum_{k=1}^3 (2k - 1)$ , then  $x =$
- (A) 6  
(B) 9  
(C) 12  
(D) 15  
(E) 16
23. If the probability that an event,  $e$ , will occur is represented by the expression  $\frac{x}{x-1}$ , then which of the following expressions represents the probability that event  $e$  will not occur?

- (A) 8
- (B) 15
- (C) 20
- (D) 27
- (E) 33

19. The diameter and the height of a right circular cylinder are equal. If the volume of the cylinder is 6, what is the height of the cylinder?

- (A) 1.5
- (B) 2.0
- (C) 2.2
- (D) 2.5
- (E) 2.8

20. If  $x^{1/4} = 20$ , then  $x =$

- (A)  $\sqrt[4]{20}$
- (B) 5
- (C) 80
- (D) 2,000
- (E) 160,000

- (A)  $\frac{x-1}{x}$
- (B)  $\frac{x+1}{x}$
- (C)  $\frac{1}{1-x}$
- (D)  $x+1$
- (E)  $x-1$

15. B 16. D 17. B 18. C 19. B 20. E