

Sample Questions: Mathematics Assessment

- 1 Money in a bank doubles every 8 years. If \$100 is deposited today, what will its value be after 24 years?
- (A) \$300 (B) \$600 (C) \$800 (D) \$900 (E) \$1,100
- 2 The x -coordinate of the point of intersection of the graphs of $-2x + y = 6$ and $x + y = -3$ is
- (A) 3 (B) 0 (C) -1 (D) -2 (E) -3
- 3 If $\log_5(x + 8) = 2$ then $x =$
- (A) 18 (B) 17 (C) 10 (D) 2 (E) $\frac{2}{\log_5 2} - 8$
- 4 $(32)^{1/5}(9)^{-1/2} =$
- (A) 6 (B) $3/2$ (C) $2/3$ (D) $(288)^{-1/10}$ (E) -6
- 5 In a standard coordinate system, the graph of the equation $y = -6x + 7$ is
- (A) a vertical line (B) a horizontal line (C) not a line
- (D) a line falling to the right (E) a line rising to the right
- 6 If $f(x) = \frac{4x+2}{x+4}$ then $f(b+1) =$
- (A) $\frac{6}{5}$ (B) $\frac{4b+6}{b+5}$ (C) $\frac{4b+3}{b+5}$ (D) $\frac{4b+2}{b+5}$ (E) $\frac{4b+2}{b+4}$
- 7 If $f(x) = \cos(3x)$ then $f(\pi/6) =$
- (A) 0 (B) $1/2$ (C) $1/\sqrt{2}$ (D) $\sqrt{3}/2$ (E) 1