

EmSAT Test-2

1-	An observer standing 50 meters away from a building notices a flagpole on the top of the building. If the angle of elevation to the base of the flagpole is 46.2° and the angle of elevation to the top of the flagpole is 50.1° , what is the height of the flagpole? <input type="checkbox"/> A. 2.3 m <input type="checkbox"/> B. 2.5 m <input type="checkbox"/> C. 59.8 m <input type="checkbox"/> D. 7.7 m <input type="checkbox"/> E. 3.4 m
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2-	If $n \geq 1$, which of the following expressions is equivalent to $\frac{n!(n+6)!}{(n+7)!(n-1)!}$? <input type="checkbox"/> A. $\frac{n}{n+7}$ <input type="checkbox"/> B. $\frac{n}{n+6}$ <input type="checkbox"/> C. $\frac{n^2+6n}{n^2+6n-7}$ <input type="checkbox"/> D. $\frac{6n}{7n-7}$ <input type="checkbox"/> E. $\frac{n+7}{n}$
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3-	If $(-5, 11)$ is a point on the terminal side of an angle θ in standard position, find the exact value of $\sec \theta$. <input type="checkbox"/> A. $-\frac{5}{11}$ <input type="checkbox"/> B. $-\frac{4\sqrt{6}}{5}$ <input type="checkbox"/> C. $-\frac{\sqrt{146}}{11}$ <input type="checkbox"/> D. $-\frac{11}{5}$ <input type="checkbox"/> E. $-\frac{\sqrt{146}}{5}$
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4-	What is the maximum value of $f(x) = -3 \sin(5x - 4)$? <input type="checkbox"/> A. 5 <input type="checkbox"/> B. 3 <input type="checkbox"/> C. 4 <input type="checkbox"/> D. 1.5 <input type="checkbox"/> E. 15
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