Multiple Choice K ___/7

Identify the choice that best completes the statement or answers the question.

___ 1. Which relation is a function?

a. {(–3, –2), (–1, 3), (0, –2), (3, 4)}
b. {(0, 1), (3, 2), (5, –3), (0, 2)}
c. {(–7, –7), (–2, 5), (–1, 6), (–2, –5)}
d. {(–4, –7), (–9, 5), (4, –2), (–9, 0)}

___ 2. Evaluate $f(x) = -4x^2 + 7$ for $f(1) + f(-2)$.

a. –6
b. 3
c. 26
d. 94

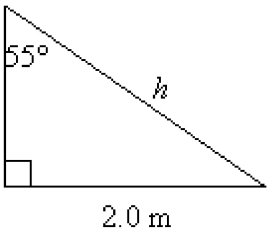
___ 3. Which of the following expresses $\sqrt{96}$ in simplest form?

a. $6\sqrt{3}$
b. $16\sqrt{6}$
c. $4\sqrt{6}$
d. $8\sqrt{2}$

___ 4. Which of the following is equivalent to the expression $\left(a^3b^4\right)^{-2}\left(a^{-3}b^{-5}\right)^{-4}$?

a. a^6b^{12}
b. $a^{12}b^{15}$
c. $\dfrac{1}{a^6b^{12}}$
d. $\dfrac{1}{a^6b^7}$

___ 5. Determine the length of the hypotenuse of the triangle to the nearest tenth of a metre.

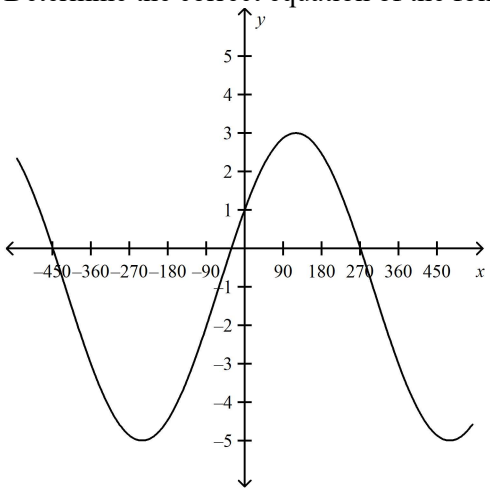


a. 3.1 m
b. 2.4 m
c. 2.1 m
d. 2.9 m

___ 6. Without graphing, determine the period of the function $y = 3.7\sin(15x) - 0.1$.

a. 24
b. 15
c. 30
d. 3.7

___ 7. Determine the correct equation of the following graph.



a. $y = 4\cos(2x - 60°) - 1$
b. $y = 4\cos(0.5x - 60°) - 1$
c. $y = 4\cos(2x + 30°) - 1$
d. $y = 4\cos(0.5x + 30°) - 1$

Full Solution - *Note- there are upto 4 Communication points available for presentation of your mathematics.*

8. Given $f(x) = \sqrt{3(x+2)} - 1$,

a) What is the parent function for $f(x)$? [K:1]

b) State all the transformations contained in $f(x)$. Also, state the domain of $f(x)$. [K:3]

c) Sketch the graph of $f(x)$. (Using a table of values may help) [K:3]