

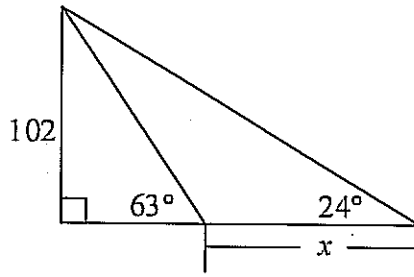
Dawson College Final Examination

May 17th, 2011 2:00-5:00

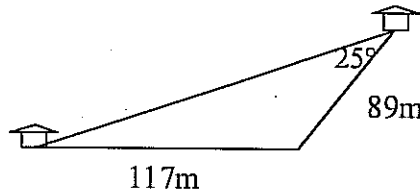
1. [5 Marks] Use a combination of the rules for exponents to simplify the expression. Write answer with only positive exponents.

$$\frac{(2^{-3}x^3y^2)^{-1}(4x^2)^2}{(4xy^2)^{-2}}$$

2. [5 Marks] Simplify the expression. $\frac{4x+1}{x-8} - \frac{2}{x+2} - \frac{8x+16}{x-4}$



17. [5 Marks] Find the distance between the two houses.



18. [5 Marks] Sketch the graph of $y = -5 \sin(3x)$ for $-\pi \leq x \leq \pi$

19. [5 Marks] Verify the following identity.

$$\sin(A + B) + \sin(A - B) = 2 \sin A \cos B$$

20. [5 Marks] Find the value of $\cos^{-1}(\frac{\sqrt{3}}{2})$

Answers

1. $2048x^3y^2$

2. $\frac{4x^2 - x + 2}{x^2 - 6x - 16}$

3. $\sqrt{x} - \sqrt{y}$

4. $\frac{1}{2}$