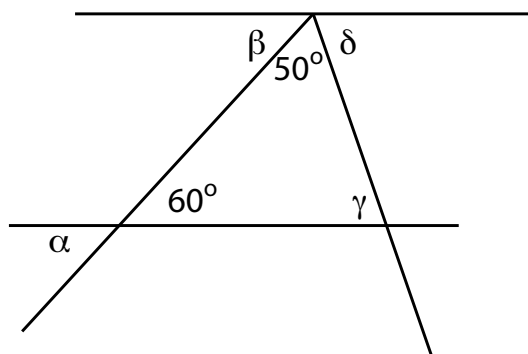


Pre-Physics 111N Math Quiz

1. Rearrange $y = 9 - 10x$ to solve for x . Evaluate x at $y = 4$.
2. Sketch a graph of the function $y = 2x - 5$.
3. Simplify $\frac{12x^2y^5}{4x^3y^2}$.
4. (a) What is the area of a circle with diameter 20 cm?
(b) What is the volume of a cylinder of radius 100 cm and length 50 cm?
(c) A cube has volume 64m^3 - what is the length of each side?
5. $\frac{1}{a} = \frac{1}{b} + \frac{1}{c}$. Find b in the case $a = 6$, $c = 3$.
6. Given that $y = vt + \frac{1}{2}at^2$ and $x = wt$, write an expression for y in terms of x that does not feature t .
7. Write down the two values of y satisfying $y^2 = k^2 + 16$ when $k = 3$.
8. What are x and y in the simultaneous equations $6x + 2y = 12$ and $4x - 2y = 28$?
9. Evaluate $y = x^{-1/2}$ for $x = 25$.
10. Write down the values of the angles $\alpha, \beta, \gamma, \delta$ in the diagram below.



11. Suppose that $y = 15h - 5$ and $z = h^3 - 10y + 7$. What is the value of z if $h = 2$?
What is the value of z if $y = 40$?
12. Simplify $y = \frac{(x+1)(x-1)}{x^2-1}$.