

Name (printed legibly):

Directions: The quiz contains 15 problems, and each problem is worth one point. Place your answer in the blank provided to the right. **Calculators are not allowed.**

For this quiz only, no partial credit will be given.

1. Simplify the expression $\frac{(x^4y^{-2})^2}{x^3y^2}$. Write your answer without negative exponents.

2. Find the equation of the line in slope intercept form ($y = mx + b$) passing through the points $(-1, 5)$ and $(2, 7)$

3. Find the exact value of $\sin\left(\frac{3\pi}{2}\right)$.

4. Solve for x in the equation $x^2 + x = 6$.

5. Evaluate $9^{3/2}$. You should have no exponents in your final answer.

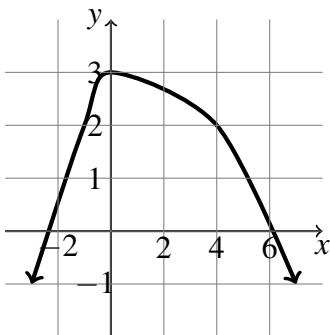
6. Find the exact value of $\log_{10}\left(\frac{1}{100}\right)$.

7. Expand and simplify $(3x + 2)^2 - 5(x - 1)$.

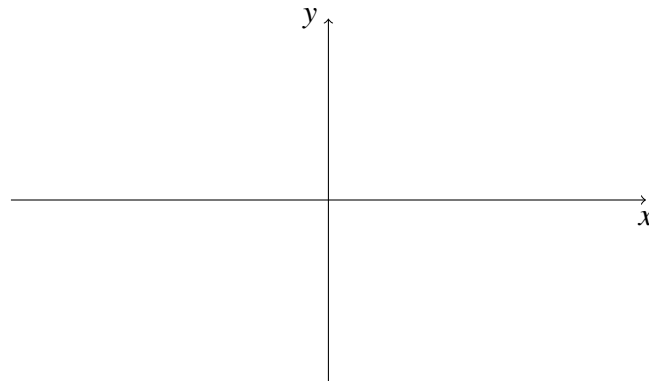
8. Solve for x exactly in the equation $e^{3-2x} = 5$.

9. Determine the domain of $f(x) = \frac{1}{\sqrt{4-x}}$. Give your answer in interval notation.

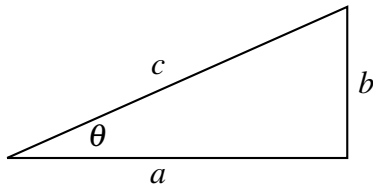
10. Use the graph of $f(x)$ below to estimate the value(s) of x such that $f(x) = 2$.



11. Sketch the graph of $y = -2\cos(x)$ on the interval $[-2\pi, 2\pi]$ and **label** the coordinates of the point where the graph intersects the y-axis.



12. In the right triangle below, $a = 6$ and $c = 10$. Determine $\tan \theta$. _____



13. Add the fractions and simplify the following expression: $\frac{1}{2+h} - \frac{1}{2}$. _____

14. If $f(x) = 7x - 2$, find the formula for $f^{-1}(y)$. _____

15. If $f(x) = x^2$ and $g(x) = x^3 + 4x$, find an expression for the composition $(g \circ f)(x)$. _____