Mind Your Ps and Qs

Here are 16 propositions involving a real number x.

By choosing p and q from this list, how many correct statements of the form $p \Rightarrow q$ or $p \iff q$ can you make?

$x\int_0^x y\,\mathrm{d}y < 0$	$x > 1$	$0 < x < 1$	$x^2 + 4x + 4 = 0$
$x = 0$	$\cos\left(\frac{x}{2}\right) > \sin\left(\frac{x}{2}\right)$	$x > 2$	$x = 1$
$2\int_0^{x^2} y\,\mathrm{d}y > x^2$	$x < 0$	$x^2 + x - 2 = 0$	$x = -2$
$x^3 > 1$	$\lvert x\rvert > 1$	$x > 4$	$\int_0^x \cos y\,\mathrm{d}y = 0$

[Note: the trig functions are measured in radians]