

1. Find  $\cos 15^\circ$
2.  $\cos\left(\arctan \frac{3}{8}\right) =$
3. In  $\triangle DRL$ ,  $d = 22$ ,  $D = 60^\circ$ ,  $R = 45^\circ$ . Find  $r$ .
4. In  $\triangle MYE$ ,  $Y = 60^\circ$ ,  $m = 8$ ,  $e = 10$ . Find  $y$ .
5. Angle  $\theta$  is in standard position, and point  $(12, 13)$  is on the terminal side. Find the value of  $\cos \theta$ .
6. Solve, using interval notation:  $\frac{3x^2 + 8x - 3}{x^2 - x - 2} \geq 0$
7. Find  $\tan 150^\circ$
8. Solve, using interval notation:  $\frac{2x^2(x+1)(3x-5)}{(x-3)^2} < 0$
9.  $\tan x = 1.2$ ,  $\tan y = 0.3$ . Find  $\tan(x + y)$
10.  $f(x) = 4x^2 - 3$ . Find and simplify the Difference Quotient.