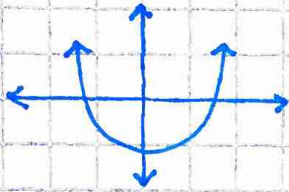


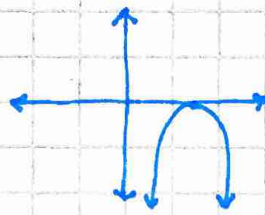
The Discriminant

$$D = b^2 - 4ac$$

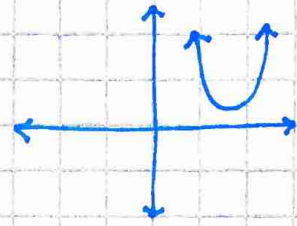
$D > 0$
2 real roots



$D = 0$
1 real root



$D < 0$
no real roots



ex1 Find the discriminant & describe the roots:

a) $2x^2 - 7x = 10$ $D = (-7)^2 - 4(2)(-10) = 49 + 80 = 129$
2 real roots

b) $x^2 - 8x + 64 = 0$

c) $x^2 + 5x + 20 = 0$

ex2 Draw a sketch of a graph with a discriminant of 15 and a is positive.

