10.7HW

Monday, May 05, 2014
7:21 AM

p.681) 3-19 odd, 34-36

③ no solution ⑤ 2 solutions ⑦ one solution ⑨ 2 solutions ⑪ 2 solutions ⑬ one solution

⑮ 2 solutions ⑰ no solution ⑲ A ㉞ below ㉟ on ㊱ above

Solutions

③ $x^2+x+1=0$
$a=1 \quad b=1 \quad c=1$
b^2-4ac
$1^2-4(1)(1)$
$1-4$
$-3 \Rightarrow$ no solution

⑤ $-2x^2+8x-4=0$
$a=-2 \quad b=8 \quad c=-4$
b^2-4ac
$8^2-4(-2)(-4)$
$64-32$
$32 \rightarrow$ 2 solutions (irrational)

⑦ $9v^2-6v+1=0$
$a=9 \quad b=-6 \quad c=1$
b^2-4ac
$(-6)^2-4(9)(1)$
$36-36$
$0 \rightarrow$ 1 sol.

⑨ $25p^2-16p=0$
$a=25 \quad b=-16 \quad c=0$
b^2-4ac
$(-16)^2-4(25)(0)$
$256 \rightarrow$ 2 solutions (rational)

⑪ $10=x^2-5x$
$-10 \qquad -10$
$0=x^2-5x-10$
$a=1 \quad b=-5 \quad c=-10$
b^2-4ac
$(-5)^2-4(1)(-10)$
$25+40$
$65 \Rightarrow$ 2 solutions (irrational)

⑬ $-3g^2-4g=\frac{4}{3}$
$-\frac{4}{3} \quad -\frac{4}{3}$
$-3g^2-4g-\frac{4}{3}=0$
$a=-3 \quad b=-4 \quad c=-\frac{4}{3}$
b^2-4ac
$(-4)^2-4(-3)(-\frac{4}{3})$
$16-16$
$0 \rightarrow$ one solution

⑮ $3n^2+3=10n-3n^2$
$+3n^2 \quad -10n \quad -10n \quad +3n^2$
$6n^2-10n+3=0$
$a=6 \quad b=-10 \quad c=3$
b^2-4ac
$(-10)^2-4(6)(3)$
$100-72$
$28 \Rightarrow$ 2 solutions (irrational)

⑰ $w^2-7w+29=4-7w$
$+7w \quad -4 \quad -4 \quad +7w$
$w^2+0w+25=0$
$a=1 \quad b=0 \quad c=25$
b^2-4ac
$0^2-4(1)(25)$
$0-100$
$-100 \Rightarrow$ no solution

⑲ $-x^2+4x=8$
$-8 \quad -8$
$-x^2+4x-8=0$
$a=-1 \quad b=4 \quad c=-8$
b^2-4ac
$(4)^2-4(-1)(-8)$
$16-32$
$-16 \Rightarrow$ no solution
(A)

(34) $y = x^2 - 3x + 2$
$a=1 \quad b=-3 \quad c=2$

$b^2 - 4ac$
$(-3)^2 - 4(1)(2)$
$9 - 8$
$1 \Rightarrow$ 2 solutions

$a=1$ so graph opens ↑
so the vertex must be
BELOW the x-axis

(35) $y = 3x^2 - 6x + 3$
$a=3 \quad b=-6 \quad c=3$

$b^2 - 4ac$
$(-6)^2 - 4(3)(3)$
$36 - 36$
$0 \Rightarrow$ 1 solution

vertex is the
x-intercept
so ON the
x-axis

(36) $y = 6x^2 - 2x + 4$
$a=6 \quad b=-2 \quad c=4$

$b^2 - 4ac$
$(-2)^2 - 4(6)(4)$
$4 - 96$
$-92 \Rightarrow$ NO SOL.

$a=6$ so the
graph opens ↑
so the vertex
must be ABOVE
the x-axis