



## MATHS

# BOOKS - RS AGGARWAL MATHS (HINGLISH)

# PARABOLA

Solved Example

**1.** Find the coordinates of the focus and the vertex, the equations of the directix and the

axis, and the lendth of the latus rectum of the

parabola  $y^2=8x$ 

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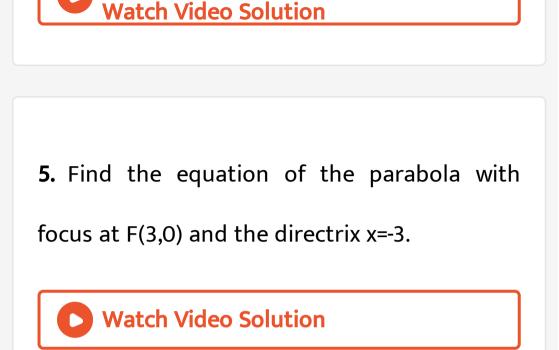
2. Find the coordinates of the focus and the vertex, the equations of the directix and the axis, and the lendth of the latus rectum of the parabola  $y^2 = -12x$ 

3. Find the coordinates of the focus and the vertex, the equations of the directix and the axis, and the lendth of the latus rectum of the parabola  $x^2 = 6y$ 

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**4.** Find the coordinates of the focus and the vertex, the equations of the directix and the axis, and the lendth of the latus rectum of the parabola  $x^2 = -16Y$ 





6. Find the equation of the parabola with vertex at the origin and y+3=0 as its directrix. Also, find its focus.

**7.** Find the equation of the parabola with vertex at (0,0) and focus at (0,2) Also, find the equation of its directrix.



**8.** Find the equation of the parabola with vertex at the origin, passing throgh the point

P(3,-4) and symmetric about the y-axis.



**9.** The equation of the parabola with vertex at the origin passing through (2, 3) and the axis along x-axis is

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#### Exercise 22

**1.** Find the coordinates of the focus and the vertex, the equations of the directrix and the axis, and length of the latus rectum of the

parabola:

(i) 
$$y^2=12x$$
 (ii)  $y^2=10x$  (iii) $3y^2=8x$ 



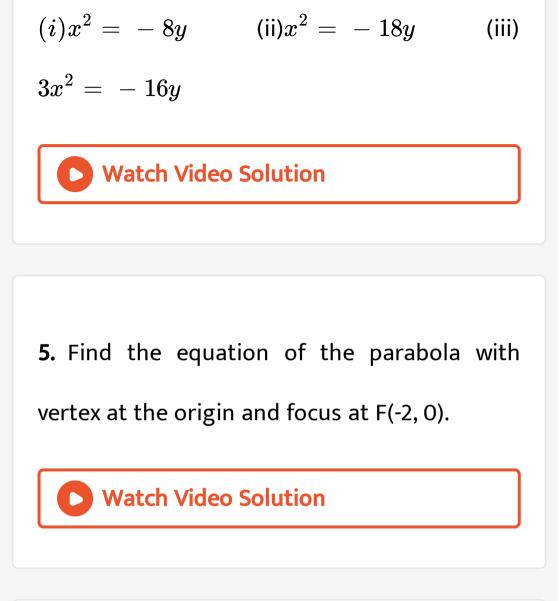
2. Find the coordinates of the focus and the vertex, the equations of the directrix and the axis, and length of the latus rectum of the parabola:

(i) 
$$y^2=~-~8x$$
 (ii) $y^2=~-~6x$  (iii) $5y^2=~-~16x$ 

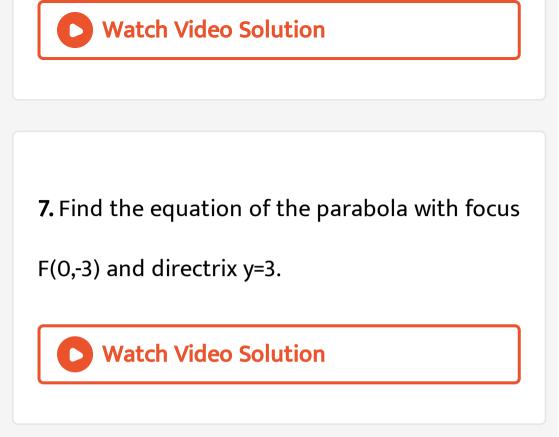
3. Find the coordinates of the focus and the vertex, the equations of the directrix and the axis, and length of the latus rectum of the parabola:  $(i)x^2 = 16y$  (ii) $x^2 = 10y$  (iii)  $3x^2 = 8y$ 

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**4.** Find the coordinates of the focus and the vertex, the equations of the directrix and the axis, and length of the latus rectum of the parabola:



**6.** Find the equation of the parabola with focus F(4, 0) and directrix x=-4.



8. Find the equation of the parabola with

vertex at the origin and focus F(0,5).



**9.** Find the equation of the parabola with vertex at the origin, passing through the point P(5,2) and symetric with respect to the y-axis.



10. Find the equation of the parabola which is symmetric about the y-axis, and passes through the point (2, -3).