



ÓPTICA

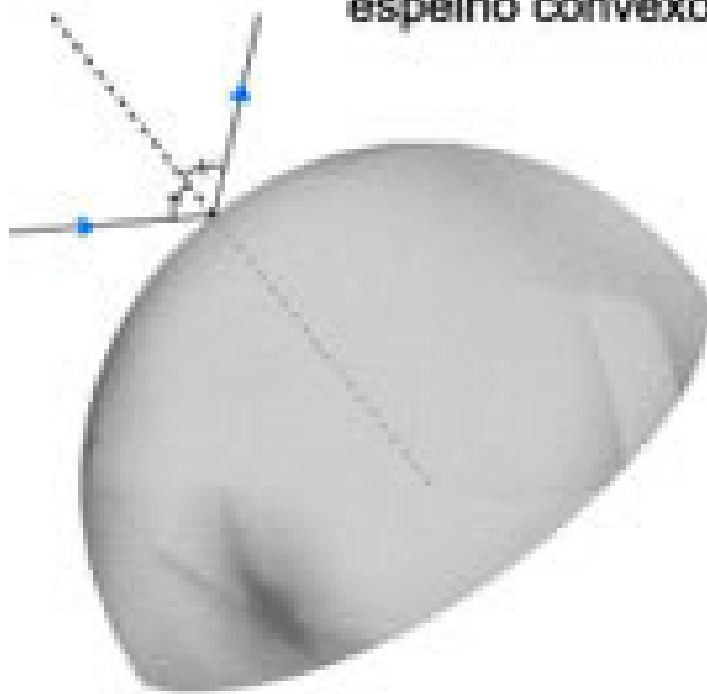
LENTES ESFÉRICAS



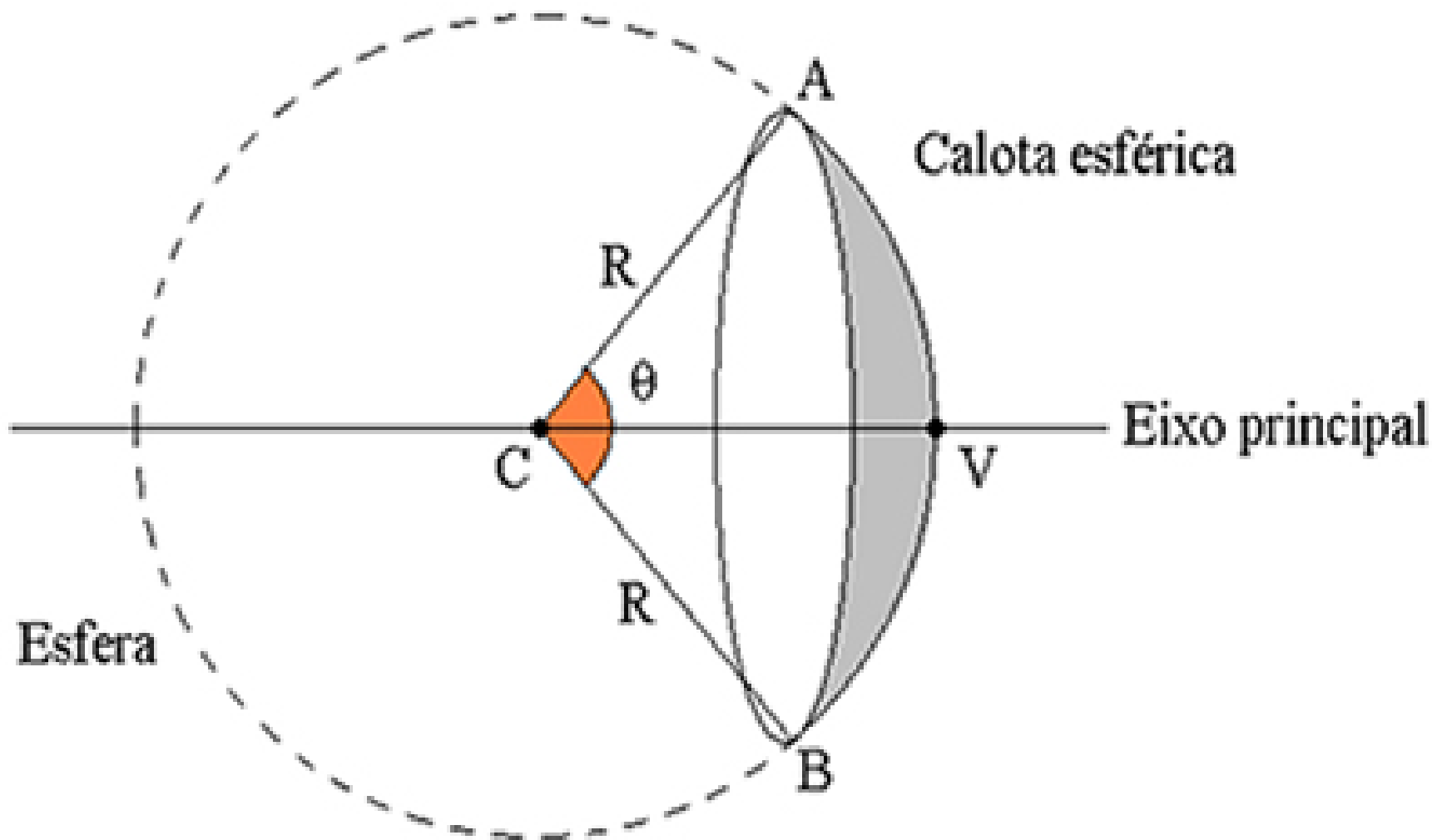


ESPELHOS ESFÉRICOS

espelho convexo



espelho côncavo



OBSERVAÇÕES

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- O ponto C é o centro do espelho

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OBSERVAÇÕES

- O ponto C é o centro do espelho
- O ponto A é a intersecção entre o eixo principal e o espelho
- O ponto F é o ponto médio entre o segmento \overline{AC}
- O ângulo θ é muito pequeno (valores inferiores a 15° já é uma boa aproximação)



ESPELHOS CONCAVOS



Raios Notáveis

FIGURA 3: RAIOS INCIDINDO PARALELAMENTE AO EIXO PRINCIPAL

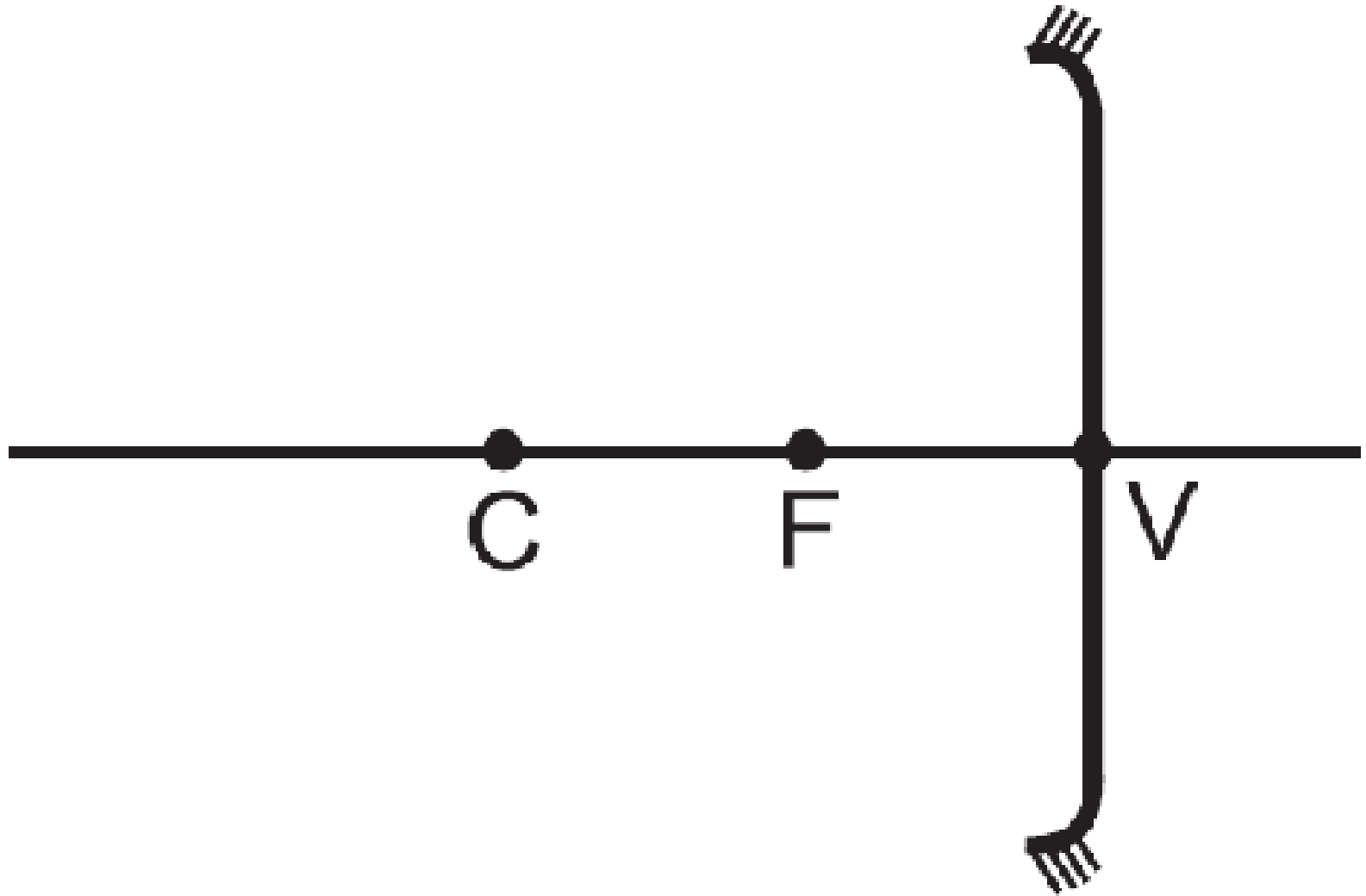


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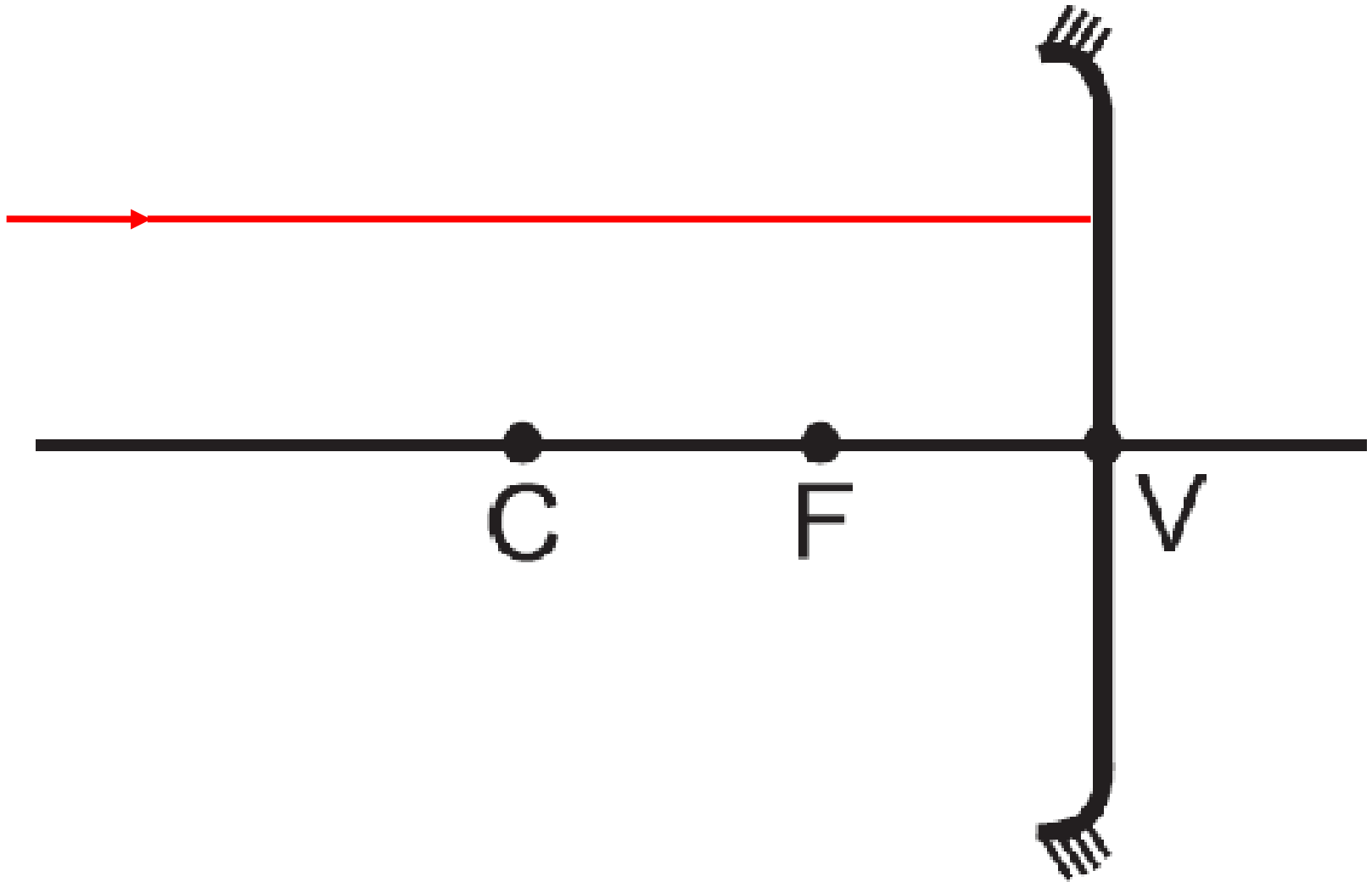


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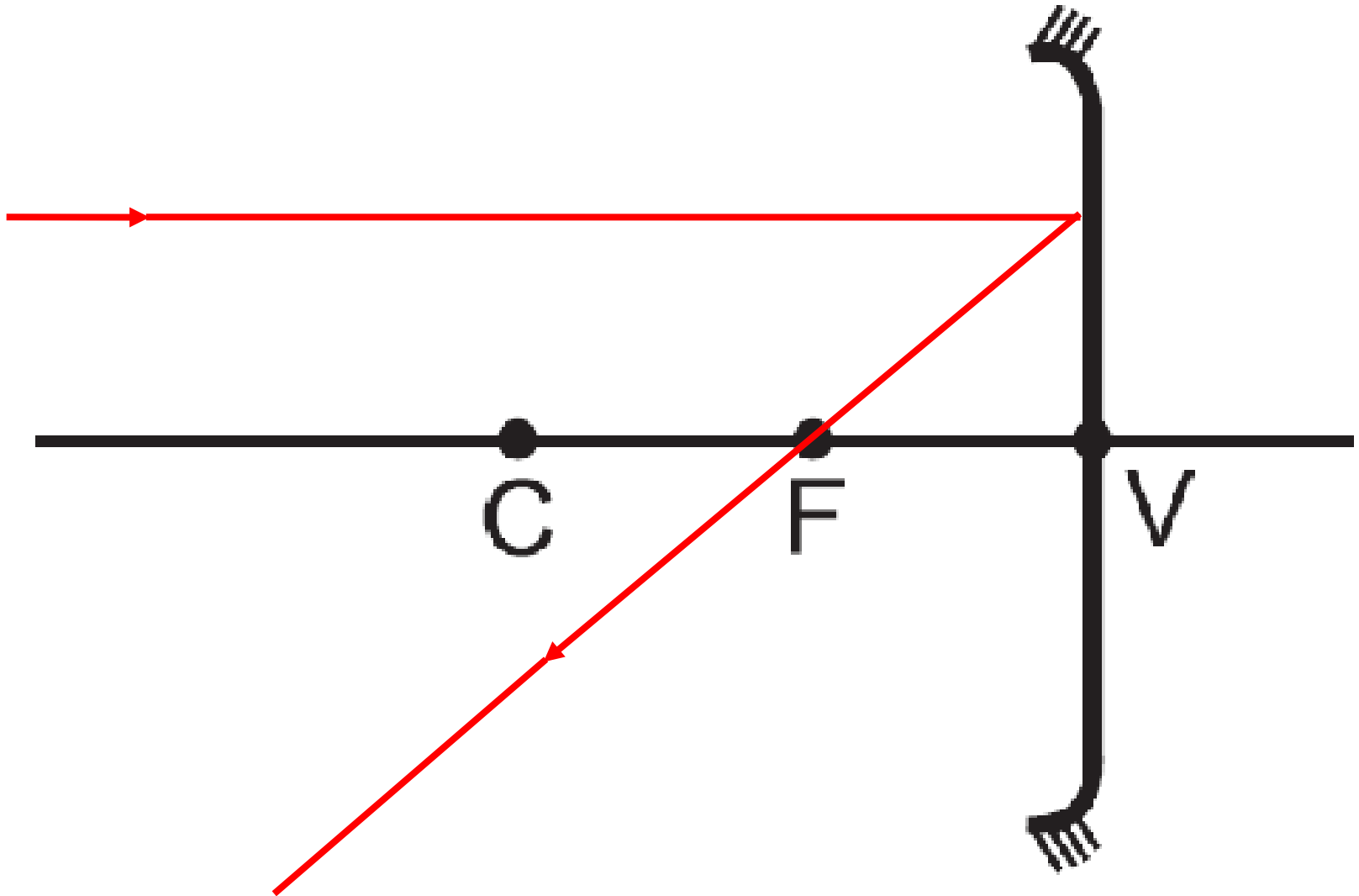


FIGURA 4: RAIOS INCIDINDO NO FOCO

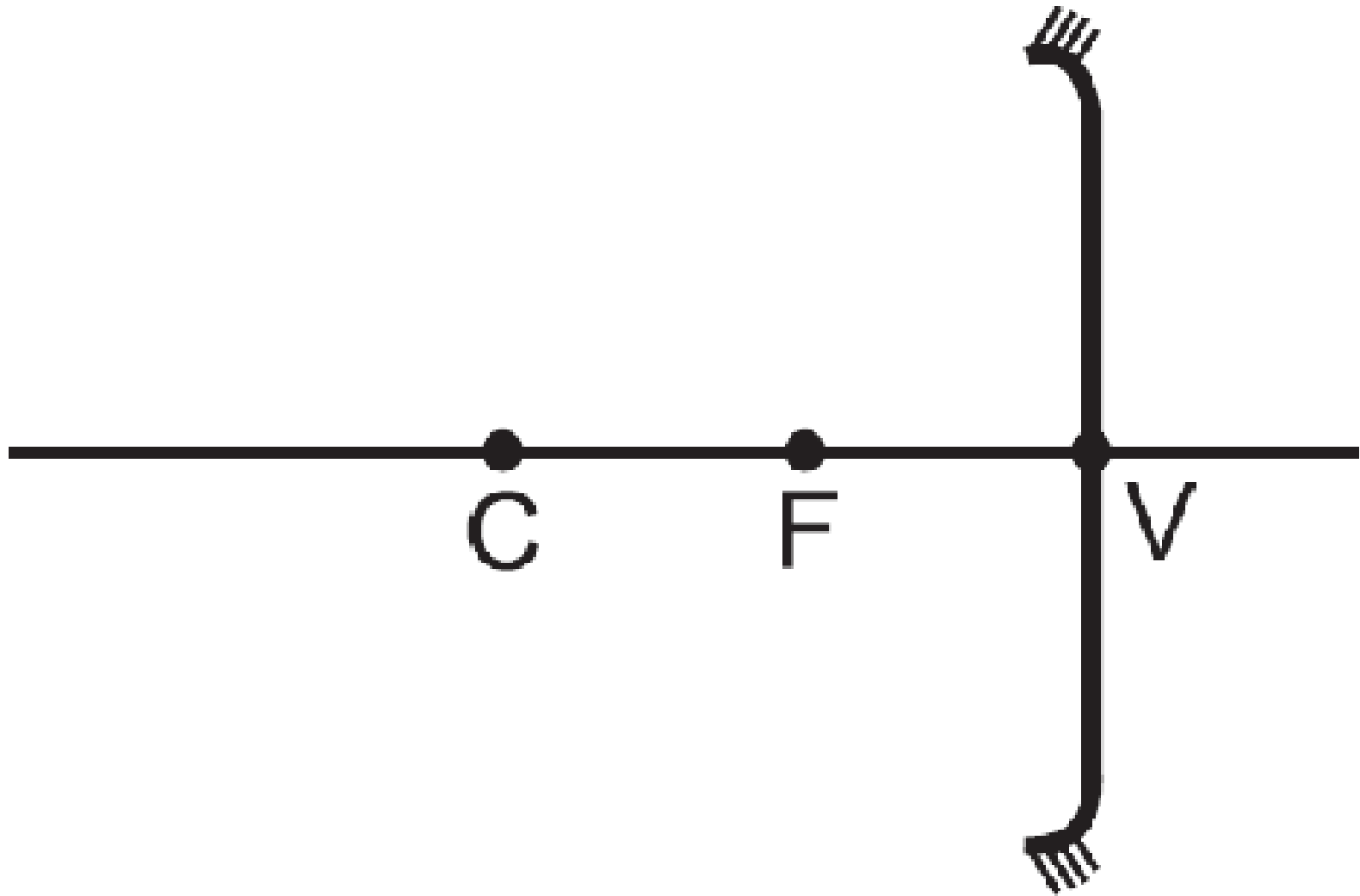


FIGURA 4: RAIOS INCIDINDO NO FOCO

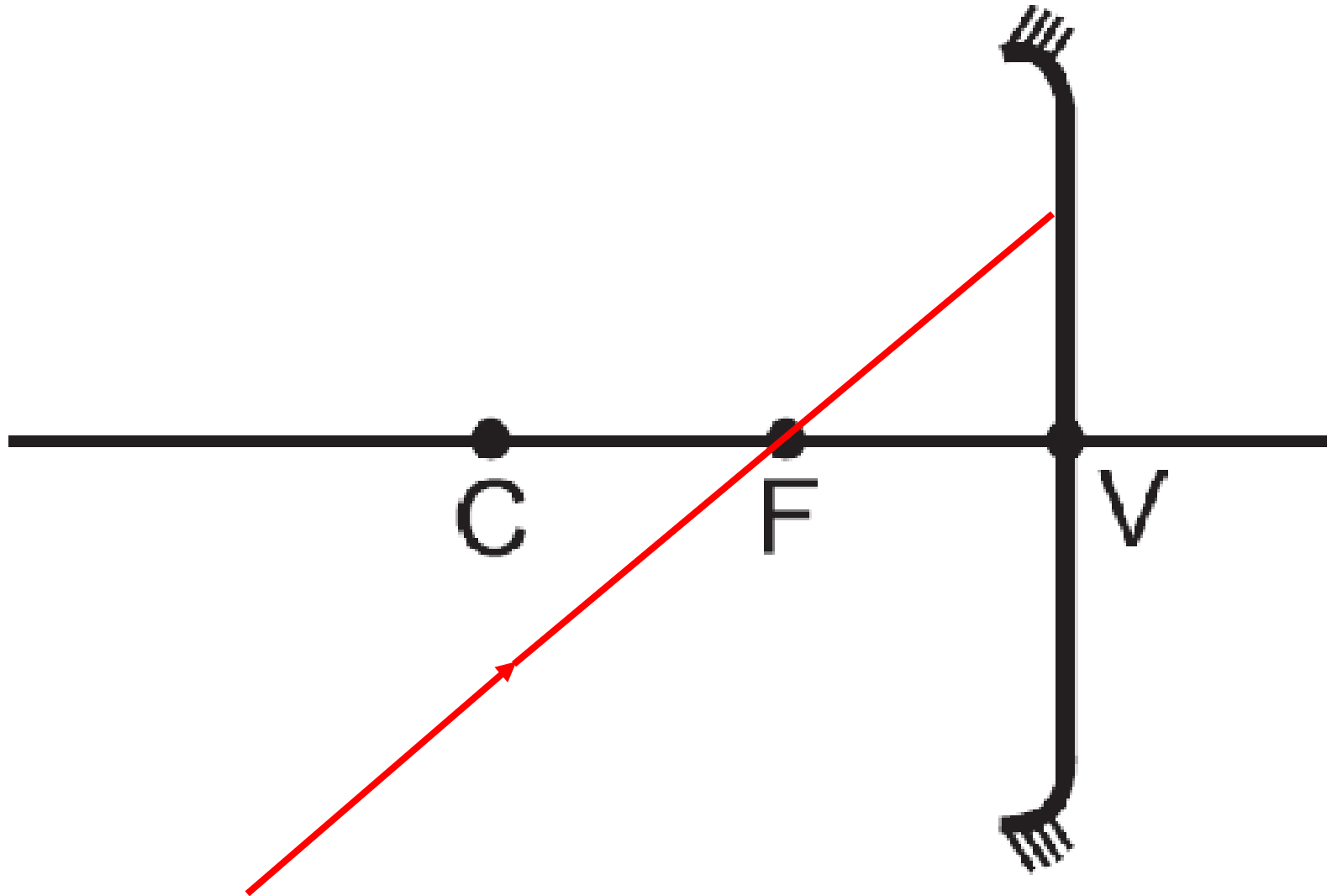


FIGURA 4: RAIOS INCIDINDO NO FOCO

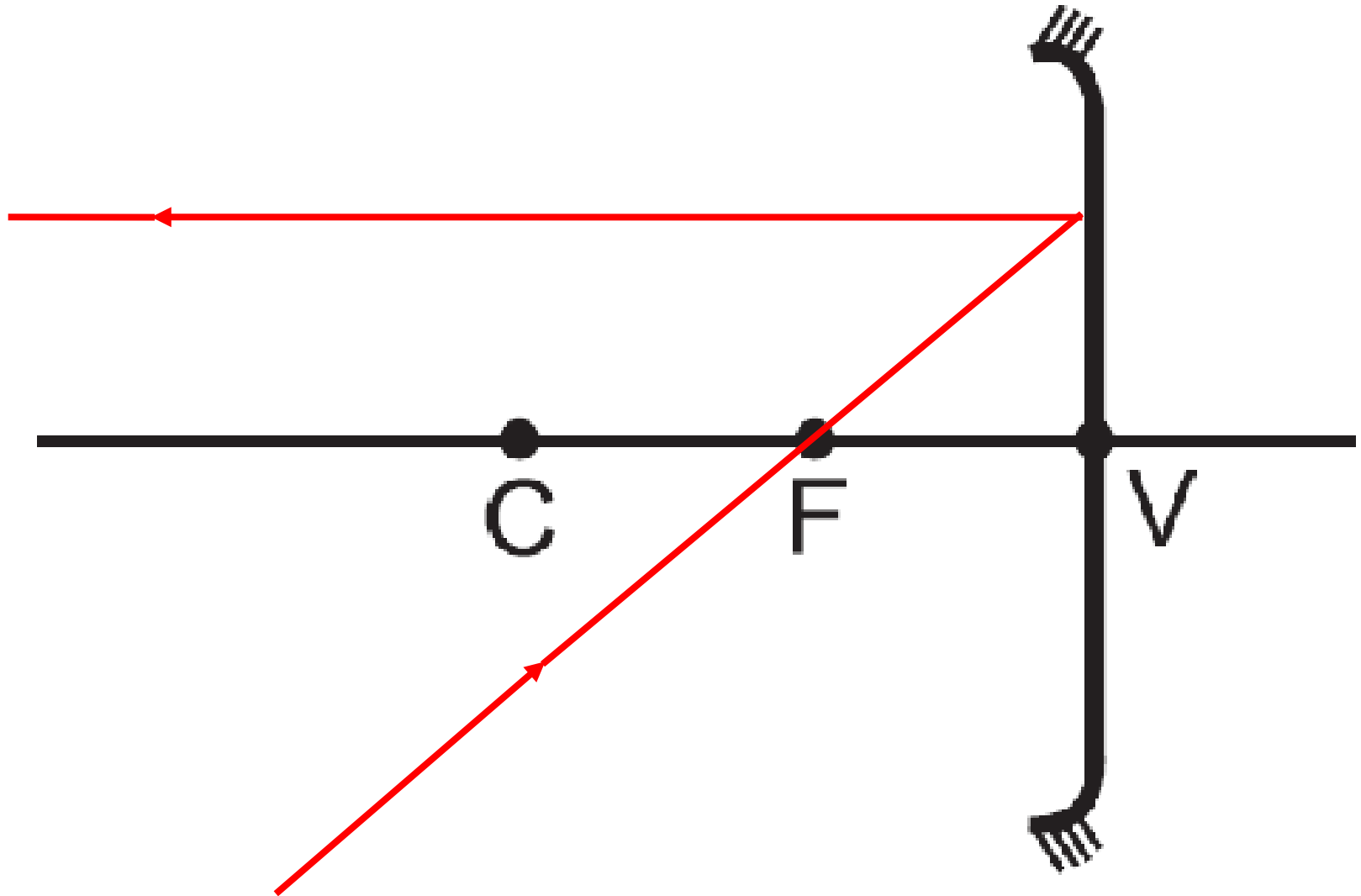


FIGURA 5: RAIOS INCIDINDO PASSANDO PELO CENTRO

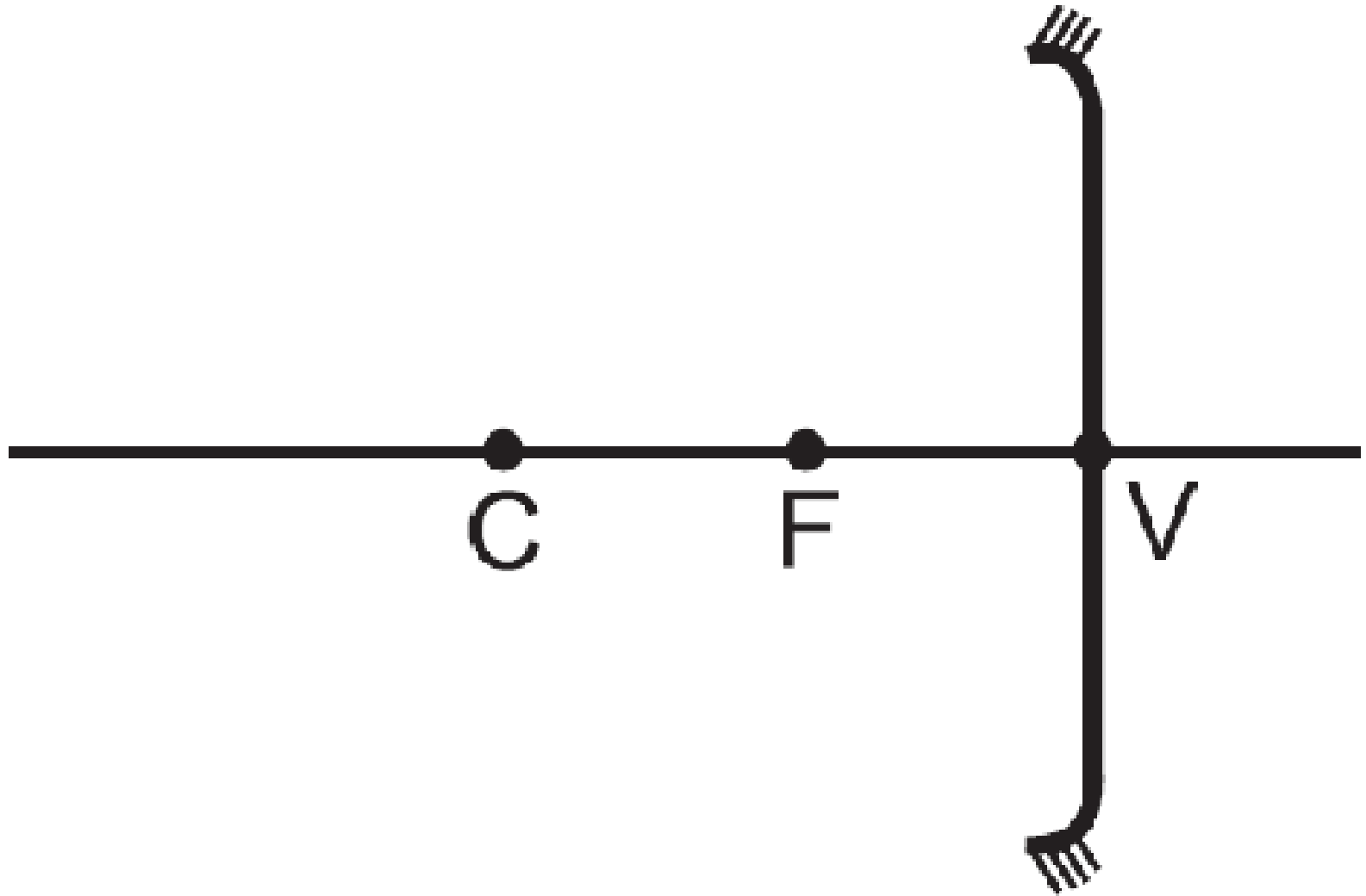


FIGURA 5: RAIOS INCIDINDO PASSANDO PELO CENTRO

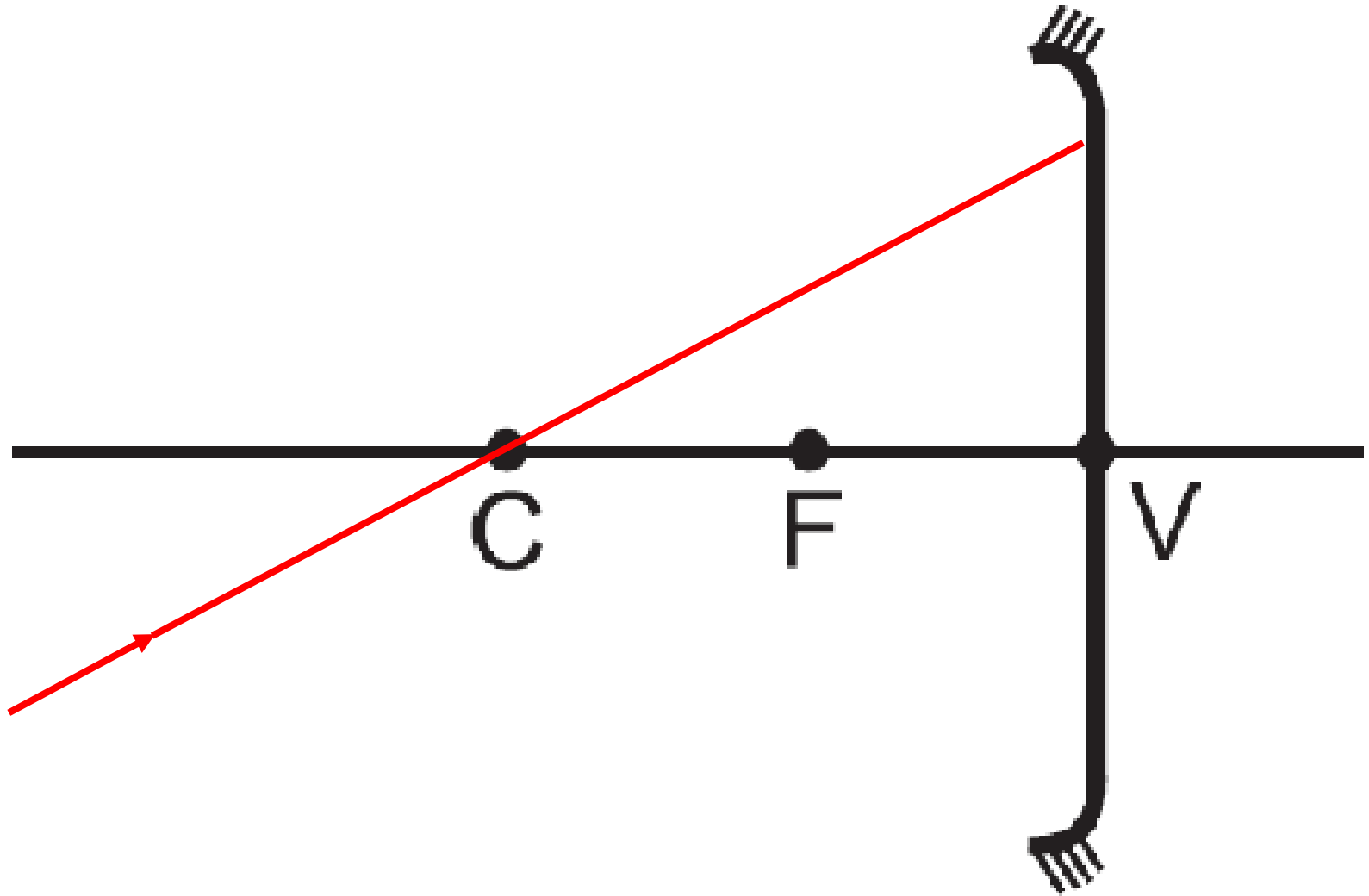


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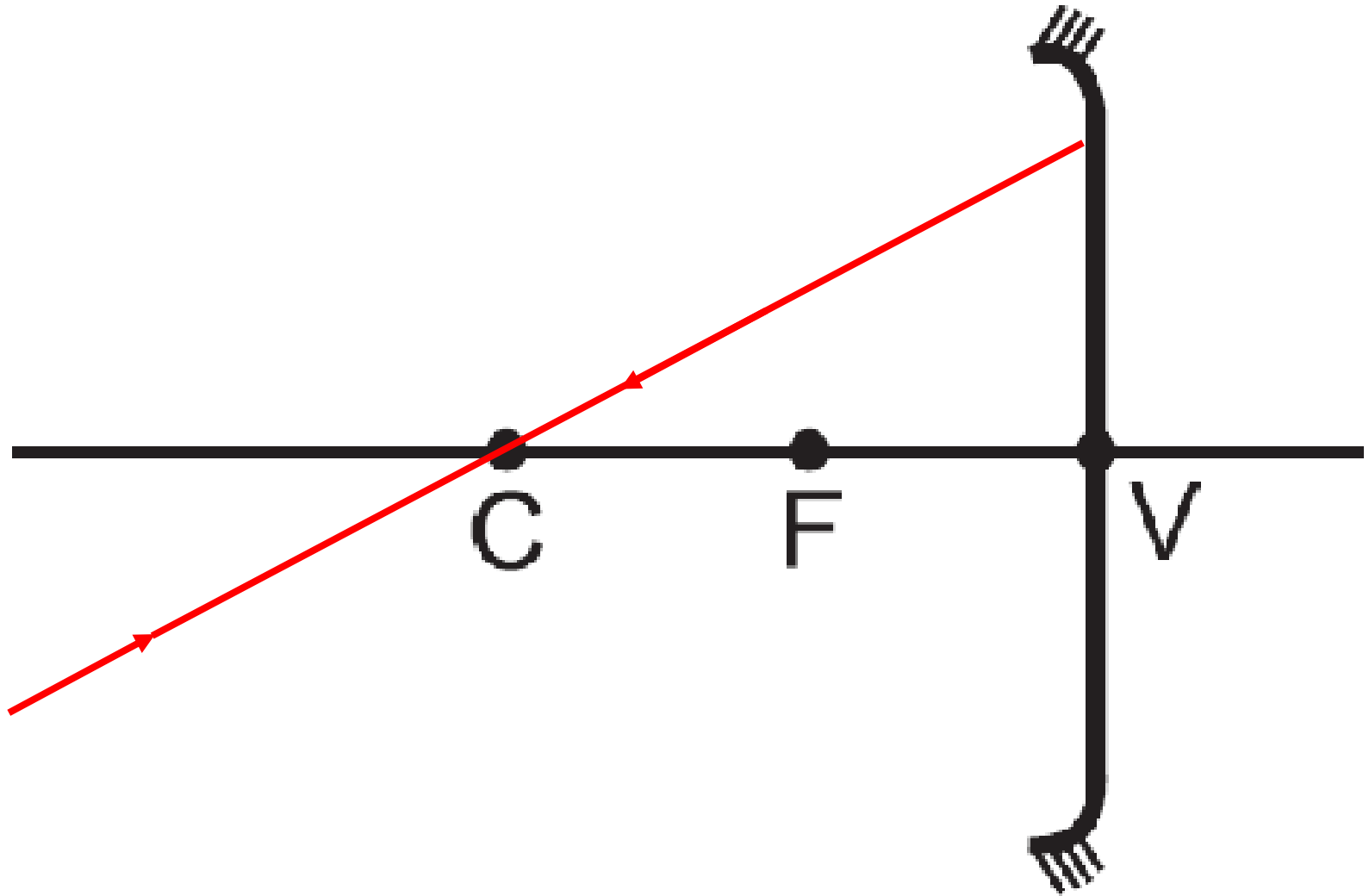


FIGURA 6: RAIOS INCIDINDO NO VÉRTICE V

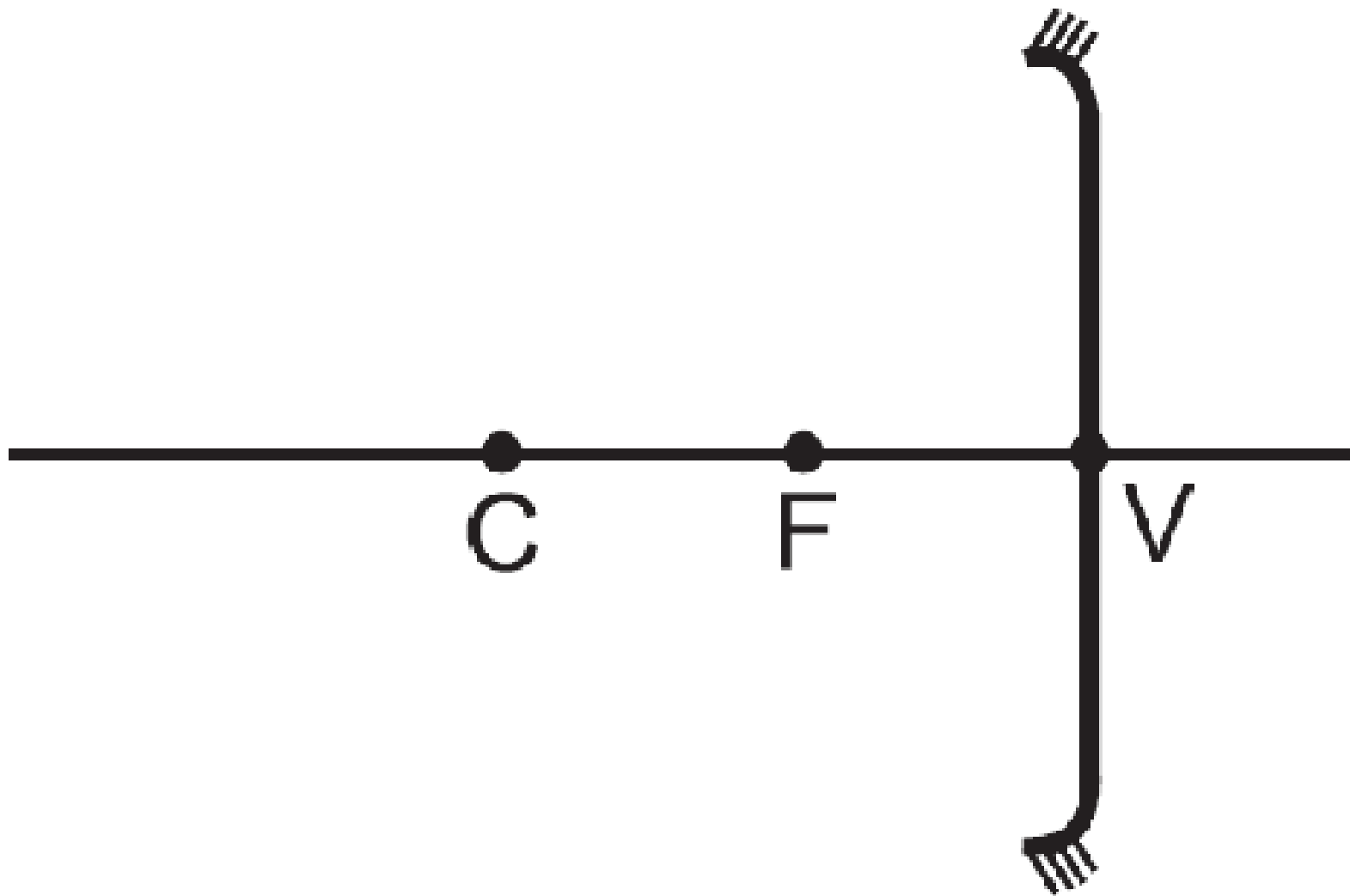


FIGURA 6: RAIOS INCIDINDO NO VÉRTICE V

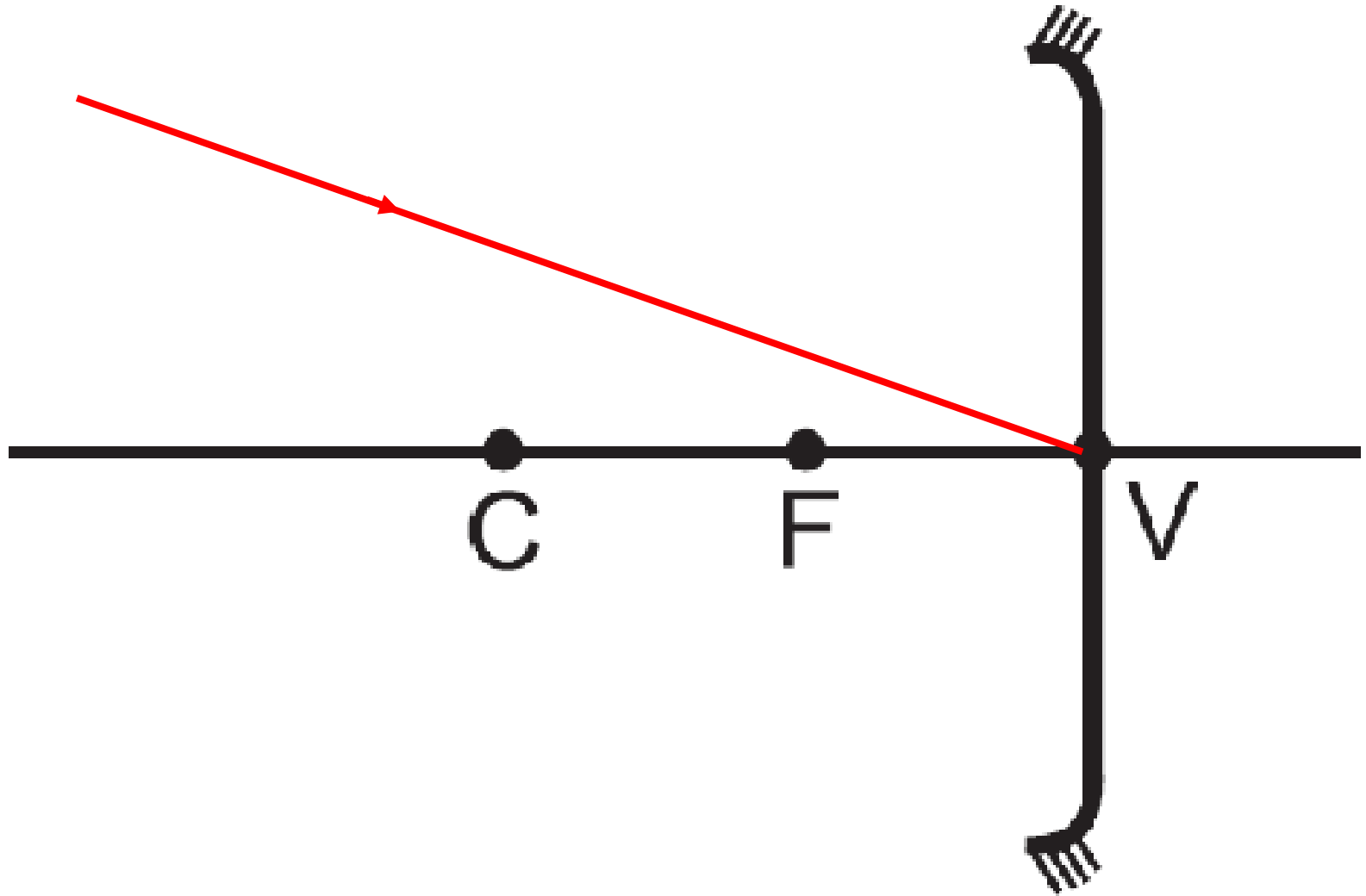
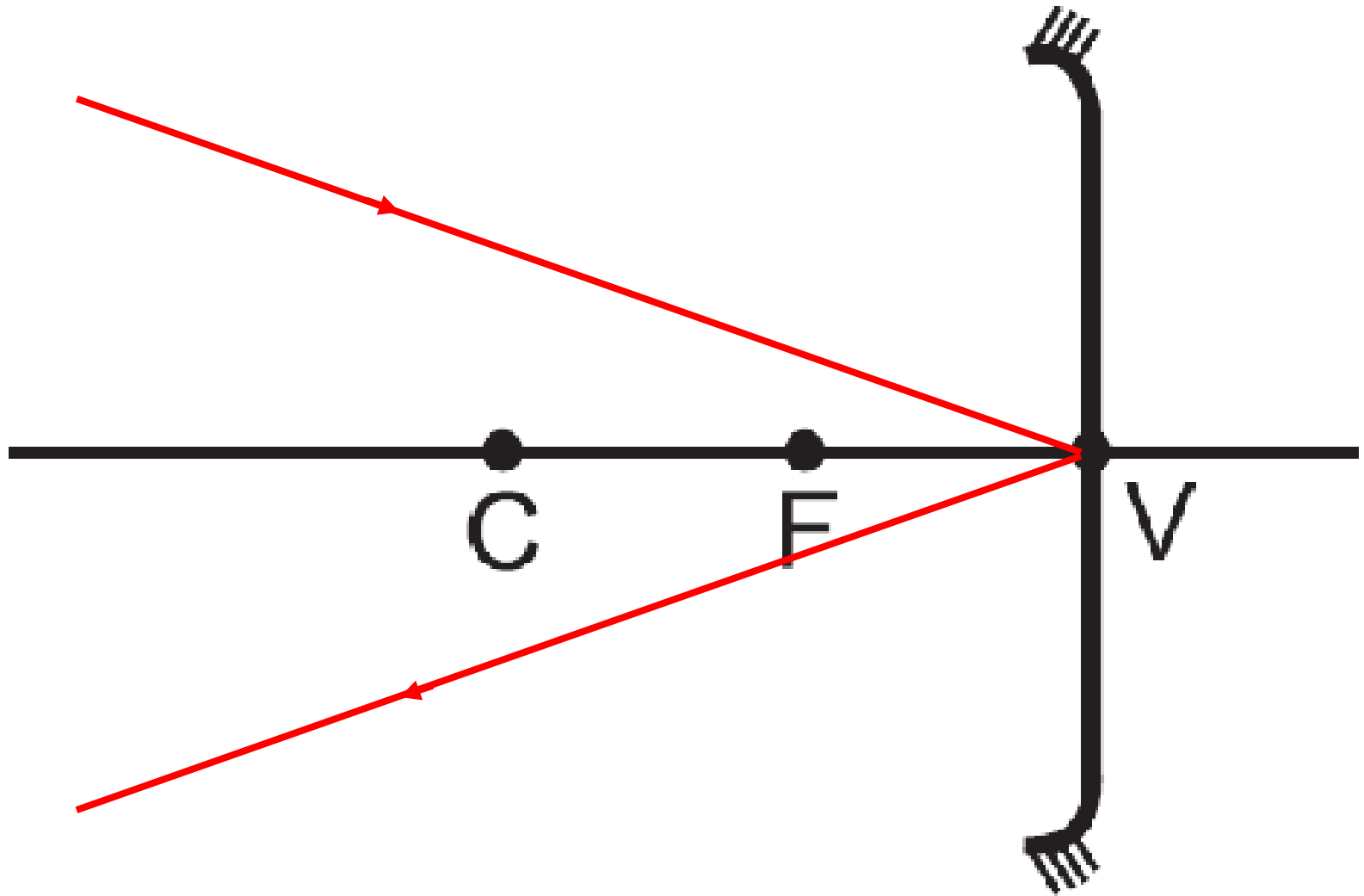


FIGURA 6: RAIOS INCIDINDO NO VÉRTICE V





ESPELHOS CONVEXOS



Raios Notáveis

FIGURA 7: RAIOS INCIDINDO PARALELAMENTE AO EIXO PRINCIPAL

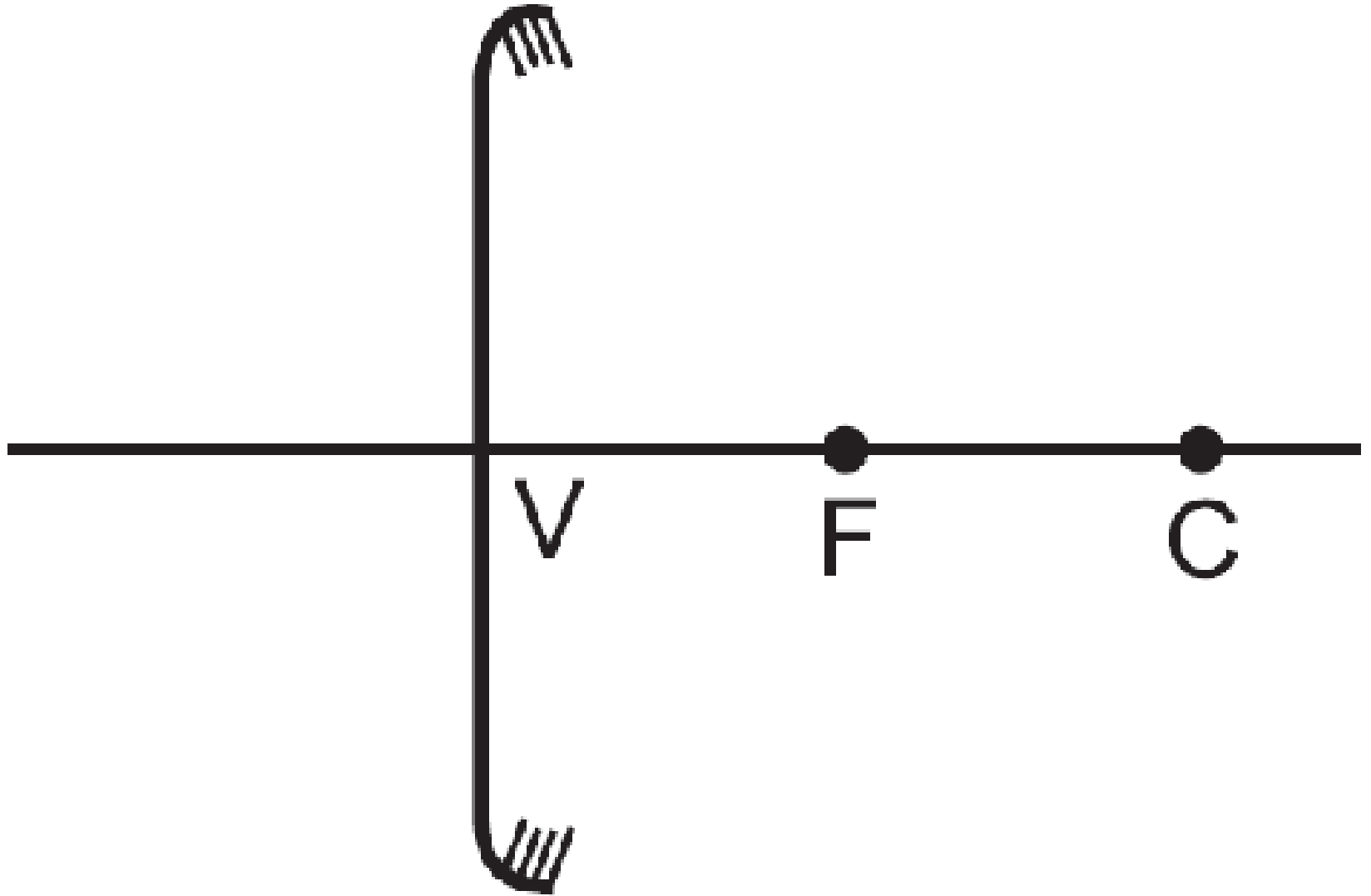


FIGURA 7: RAIOS INCIDINDO PARALELAMENTE AO EIXO PRINCIPAL

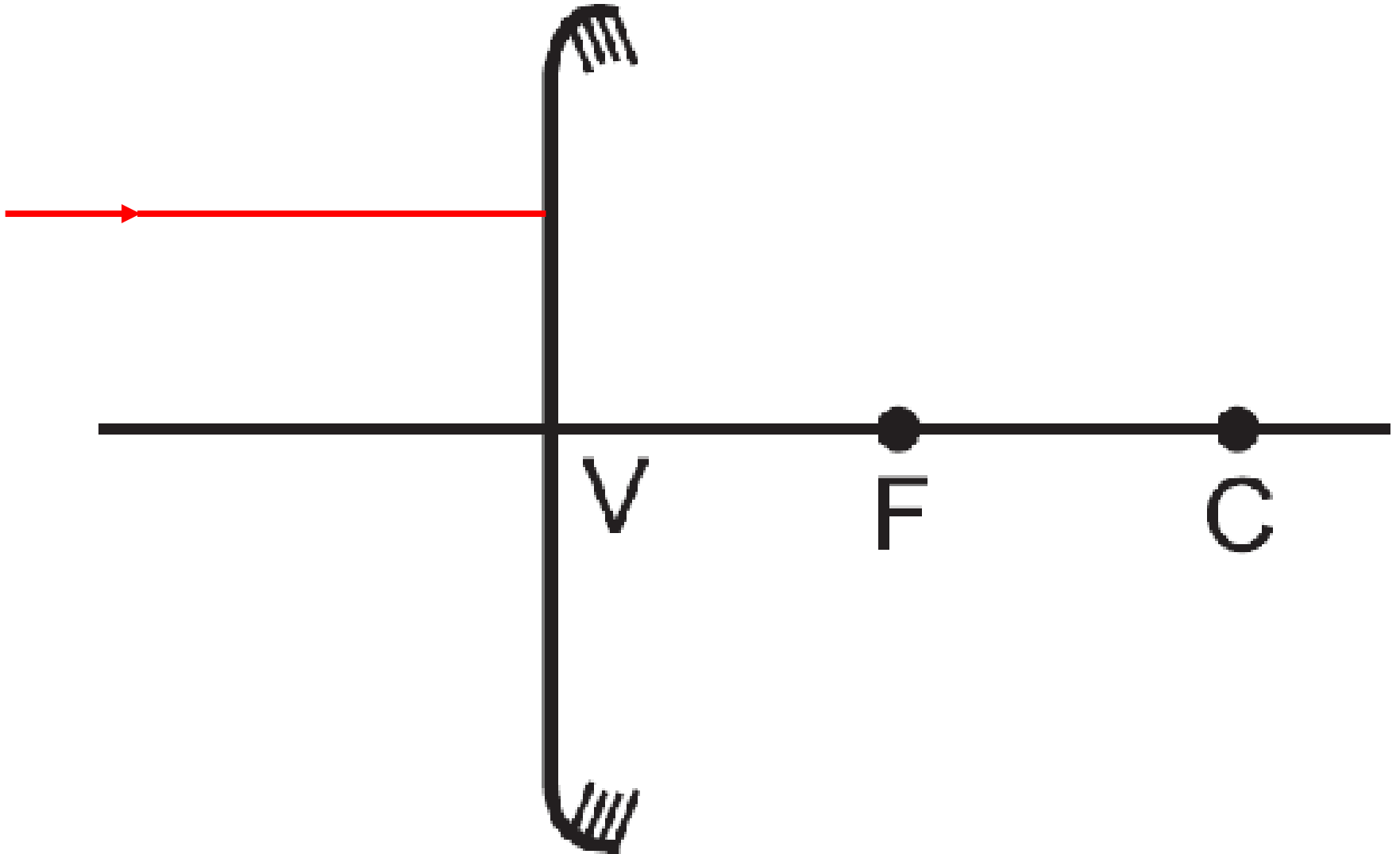


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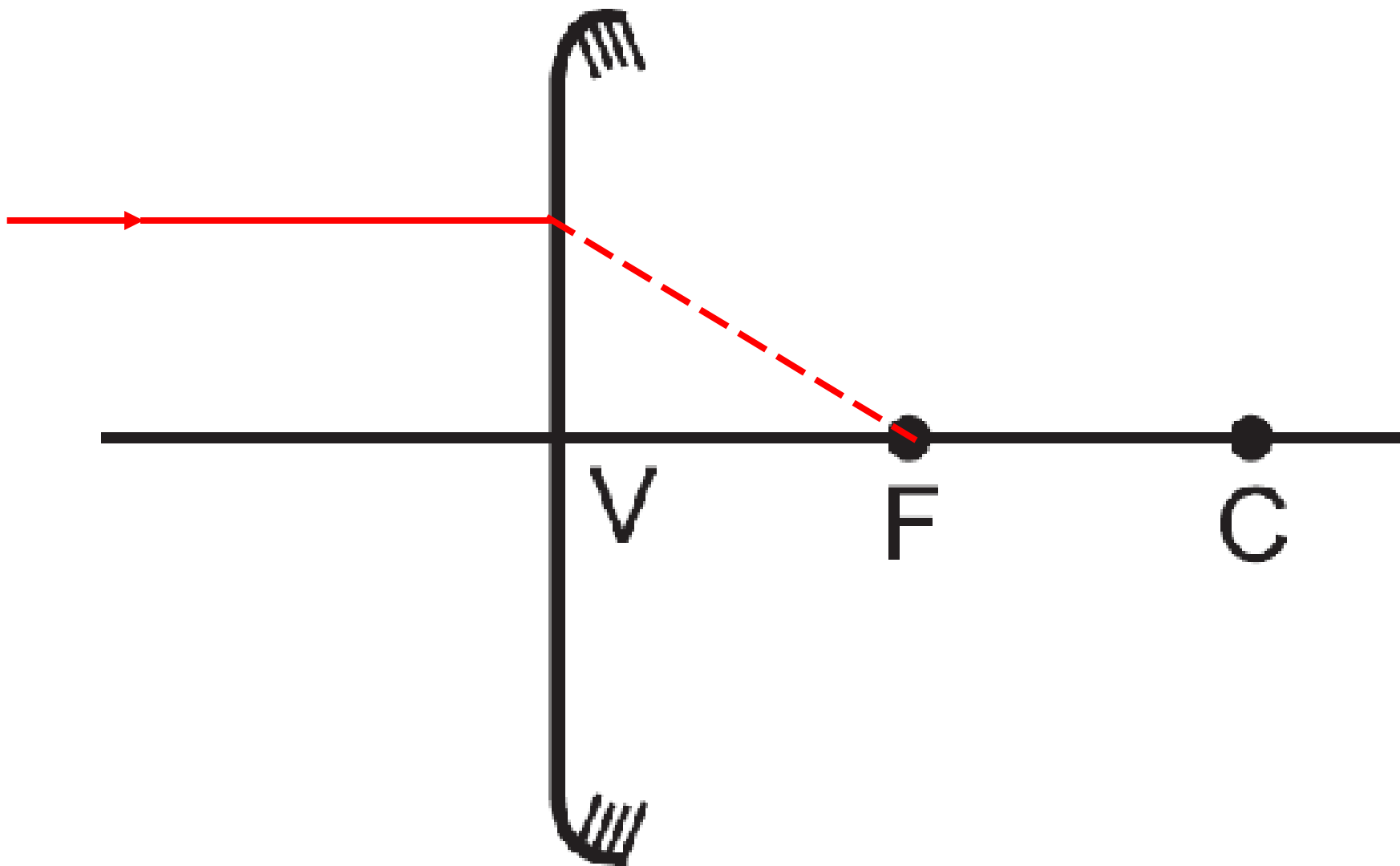


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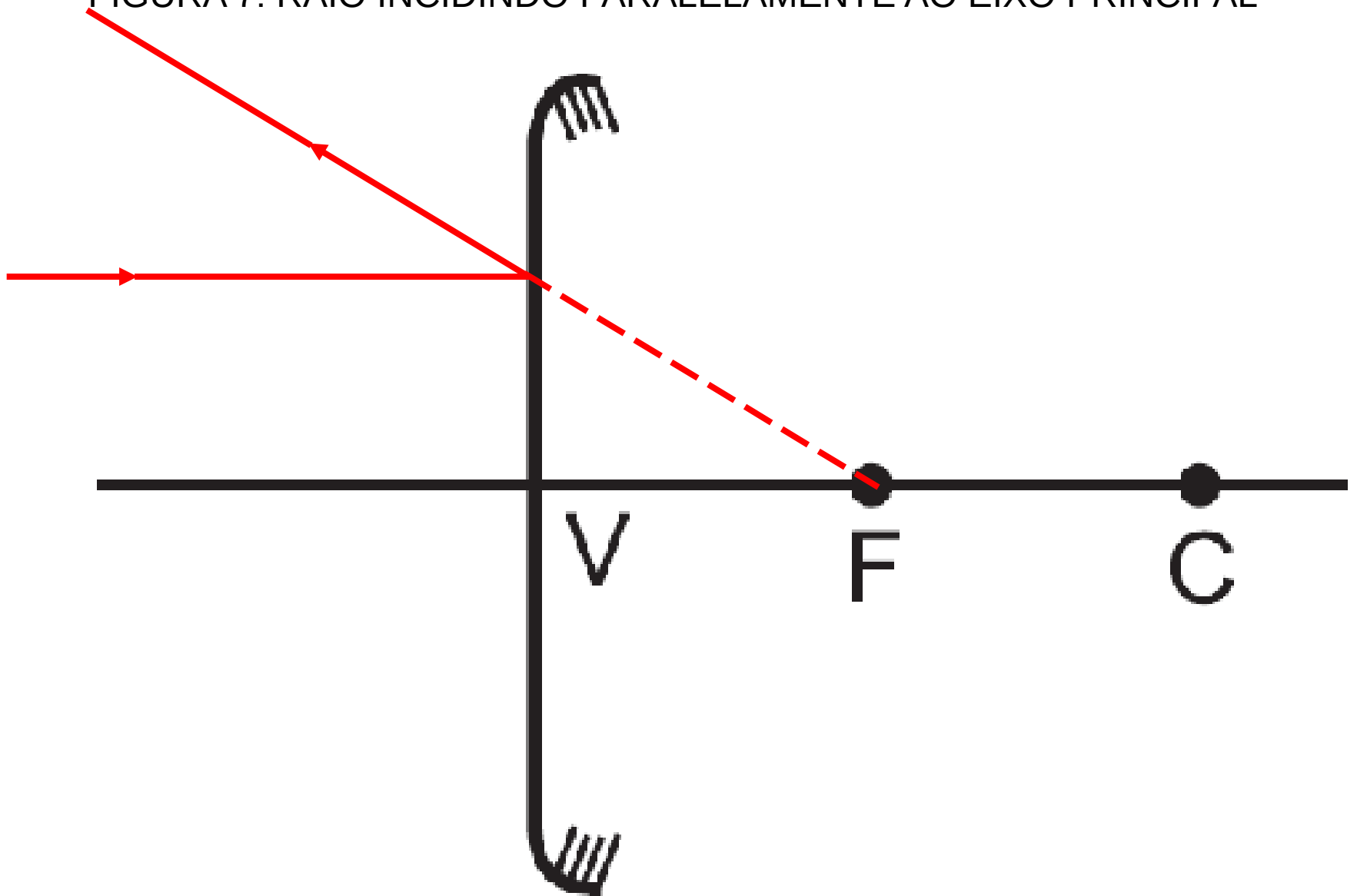


FIGURA 8: RAIOS INCIDINDO NA DIREÇÃO DO FOCO

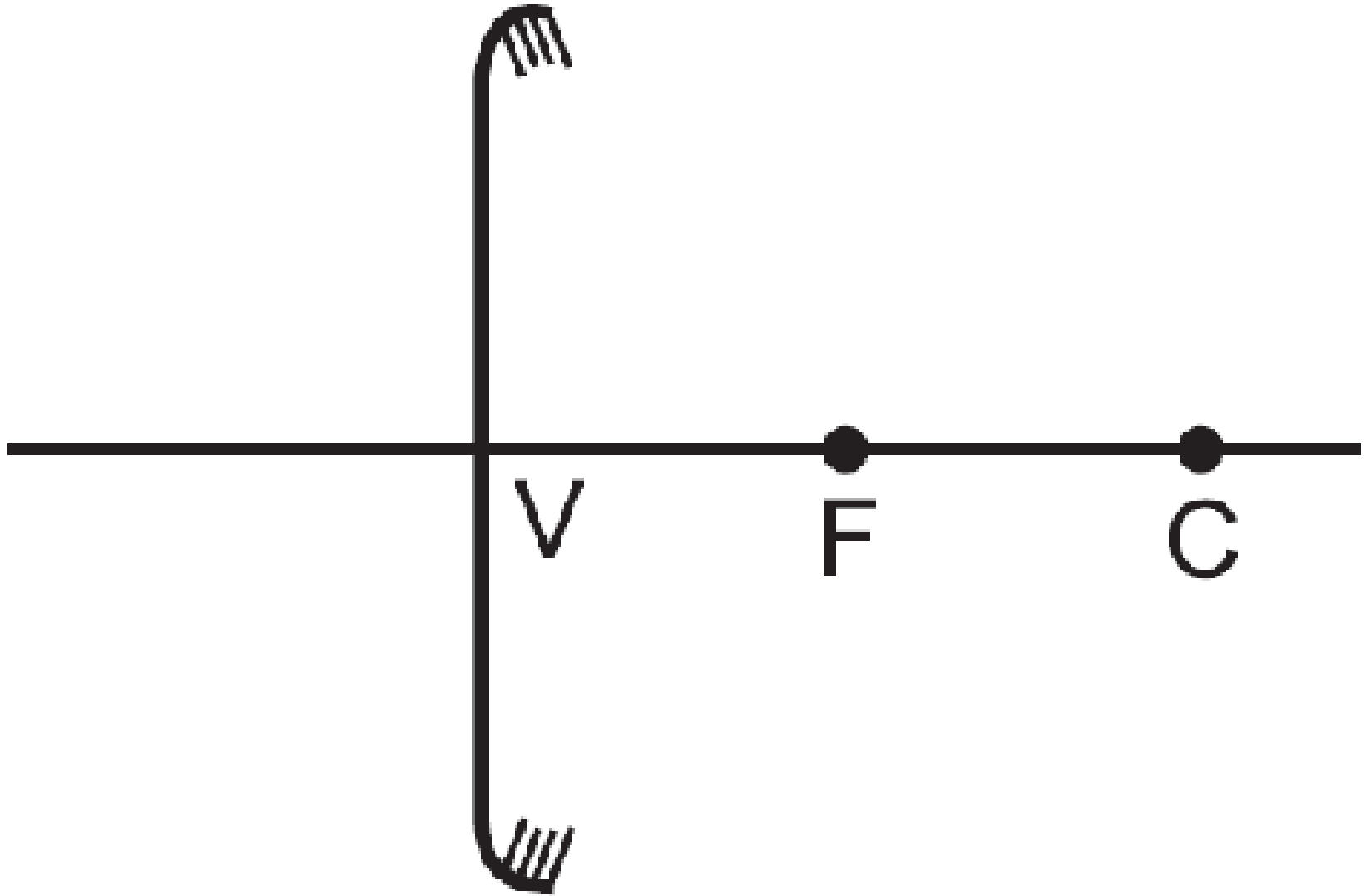


FIGURA 8: RAIOS INCIDINDO NA DIREÇÃO DO FOCO

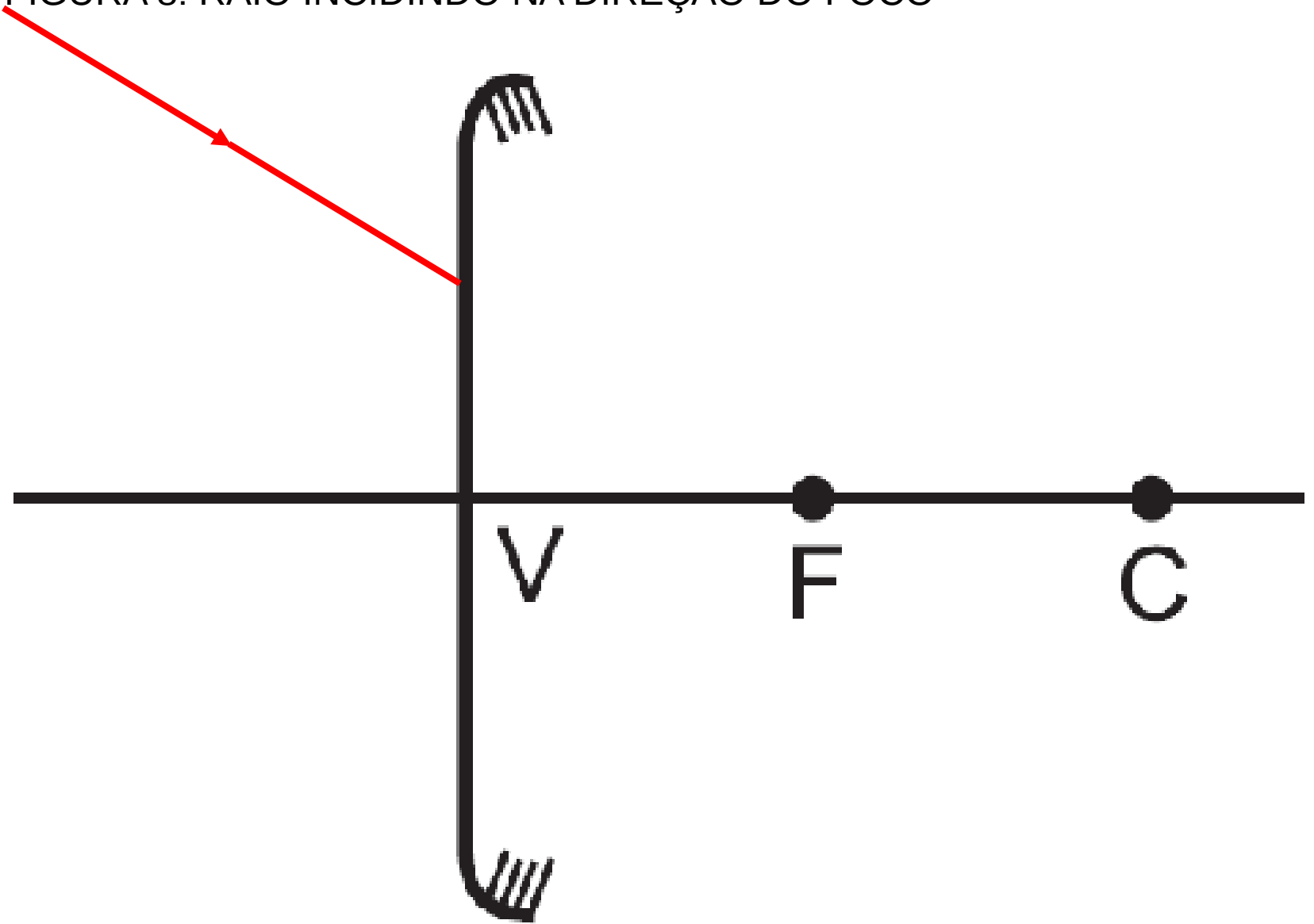


FIGURA 8: RAIOS INCIDINDO NA DIREÇÃO DO FOCO

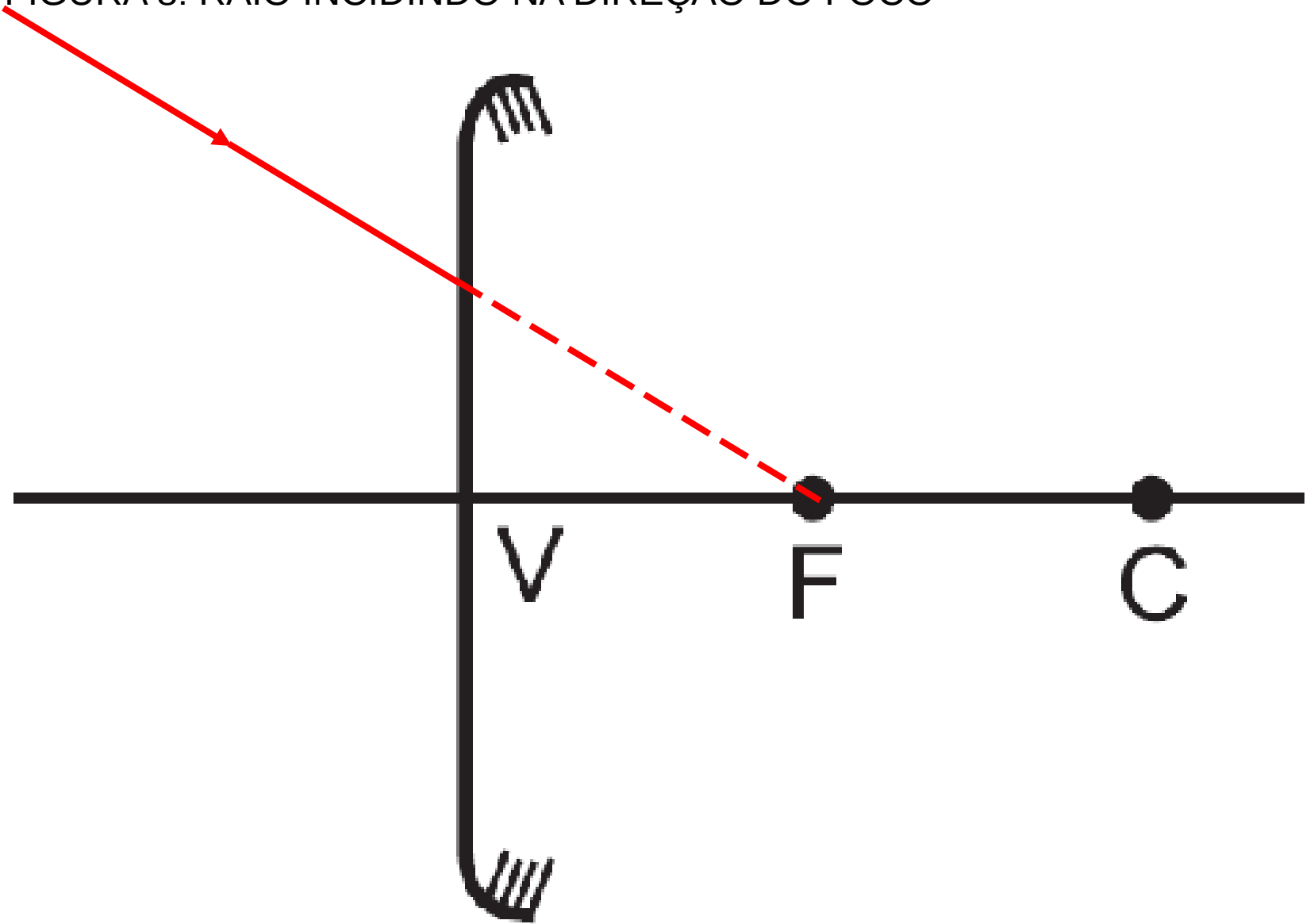


FIGURA 8: RAIOS INCIDINDO NA DIREÇÃO DO FOCO

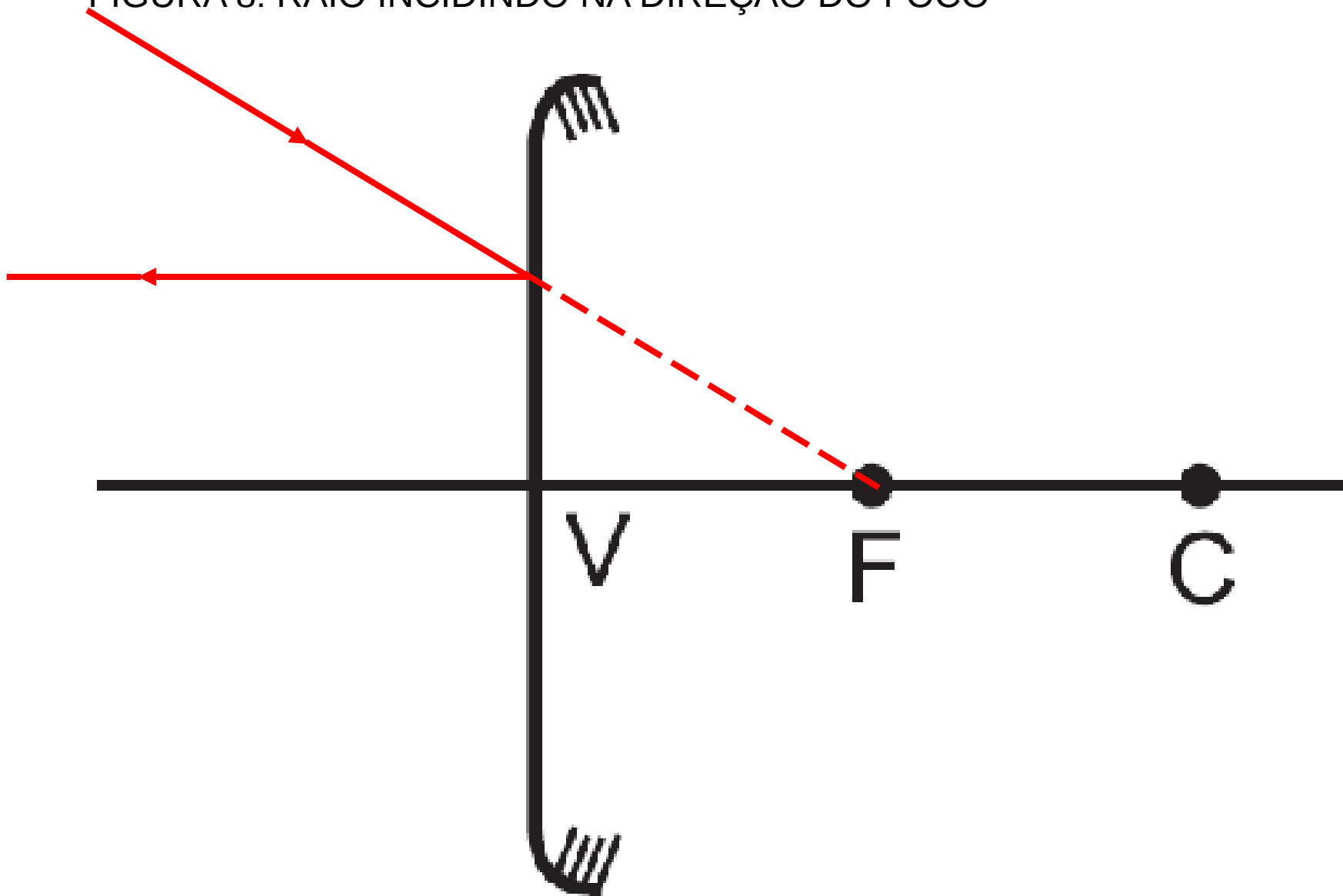


FIGURA 9: RAIOS INCIDINDO NA DIREÇÃO DE C

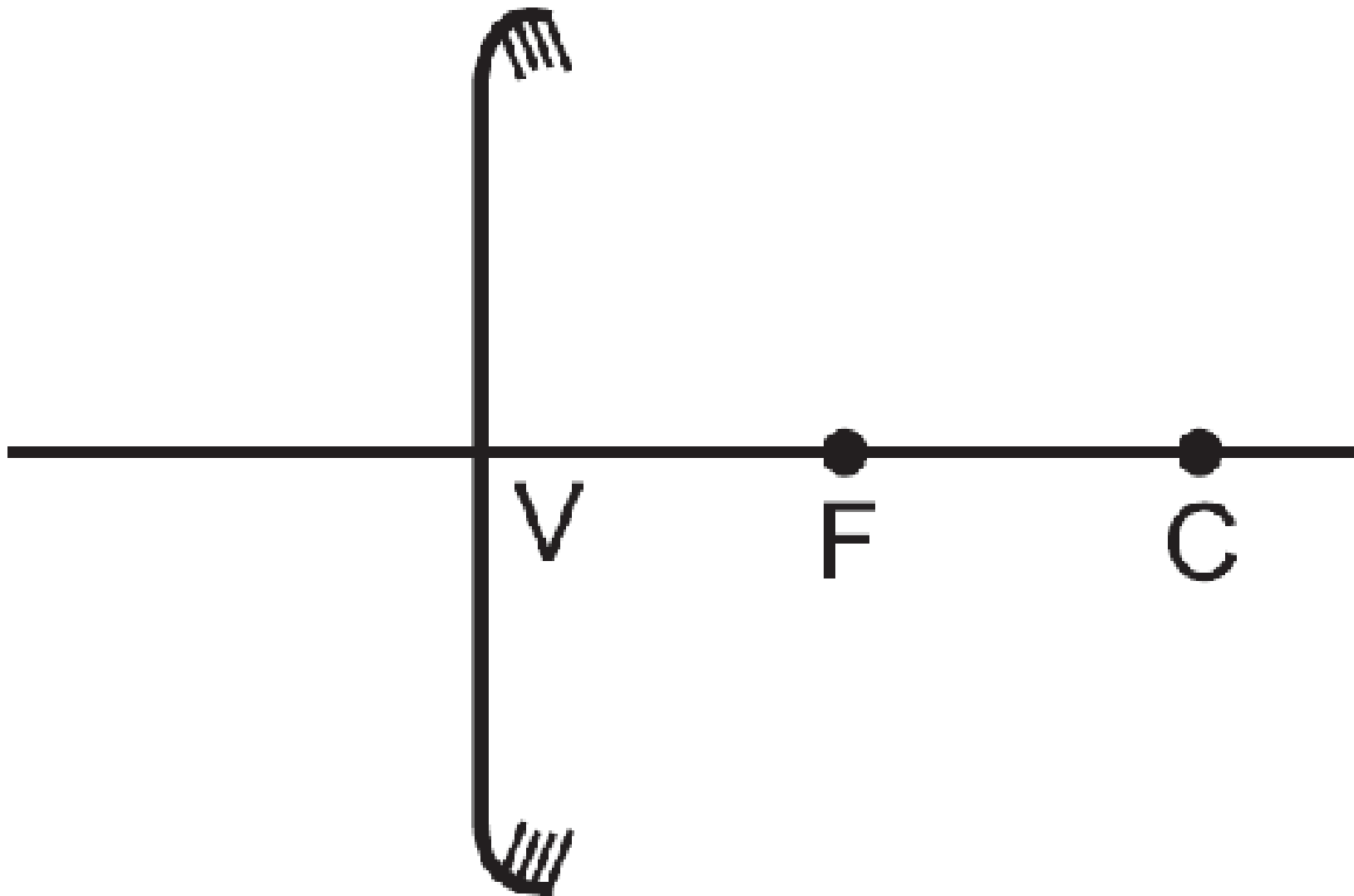


FIGURA 9: RAIOS INCIDINDO NA DIREÇÃO DE C

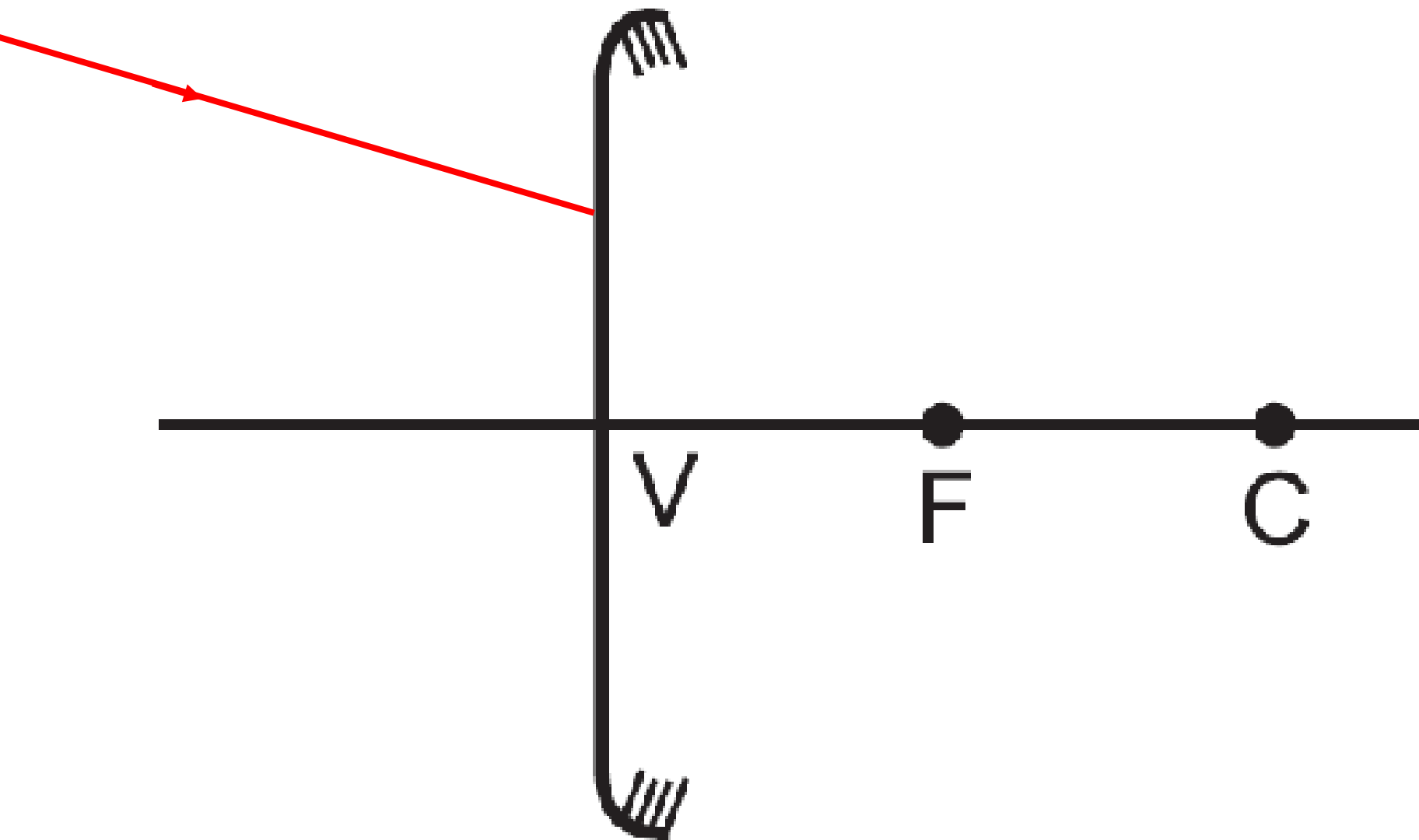


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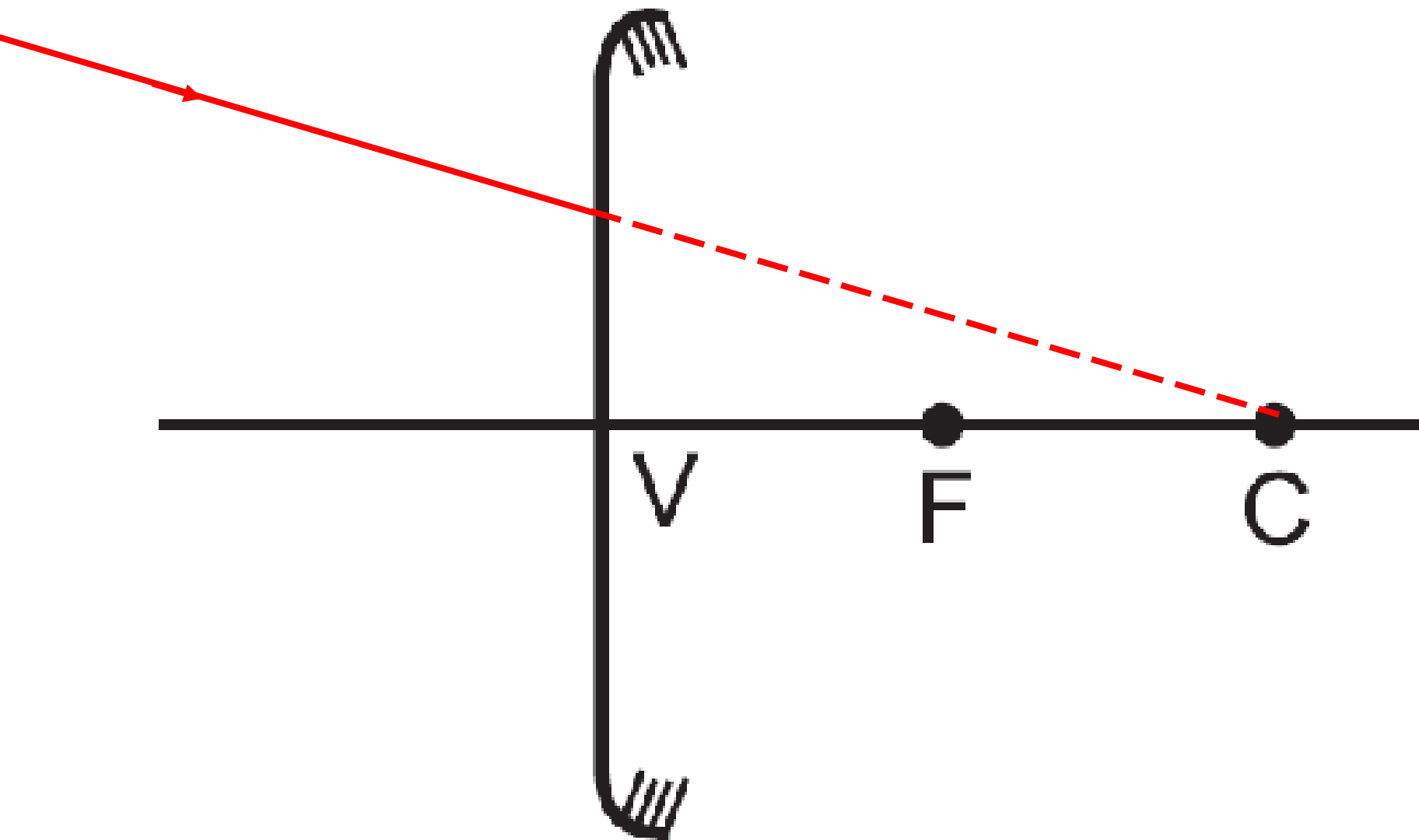


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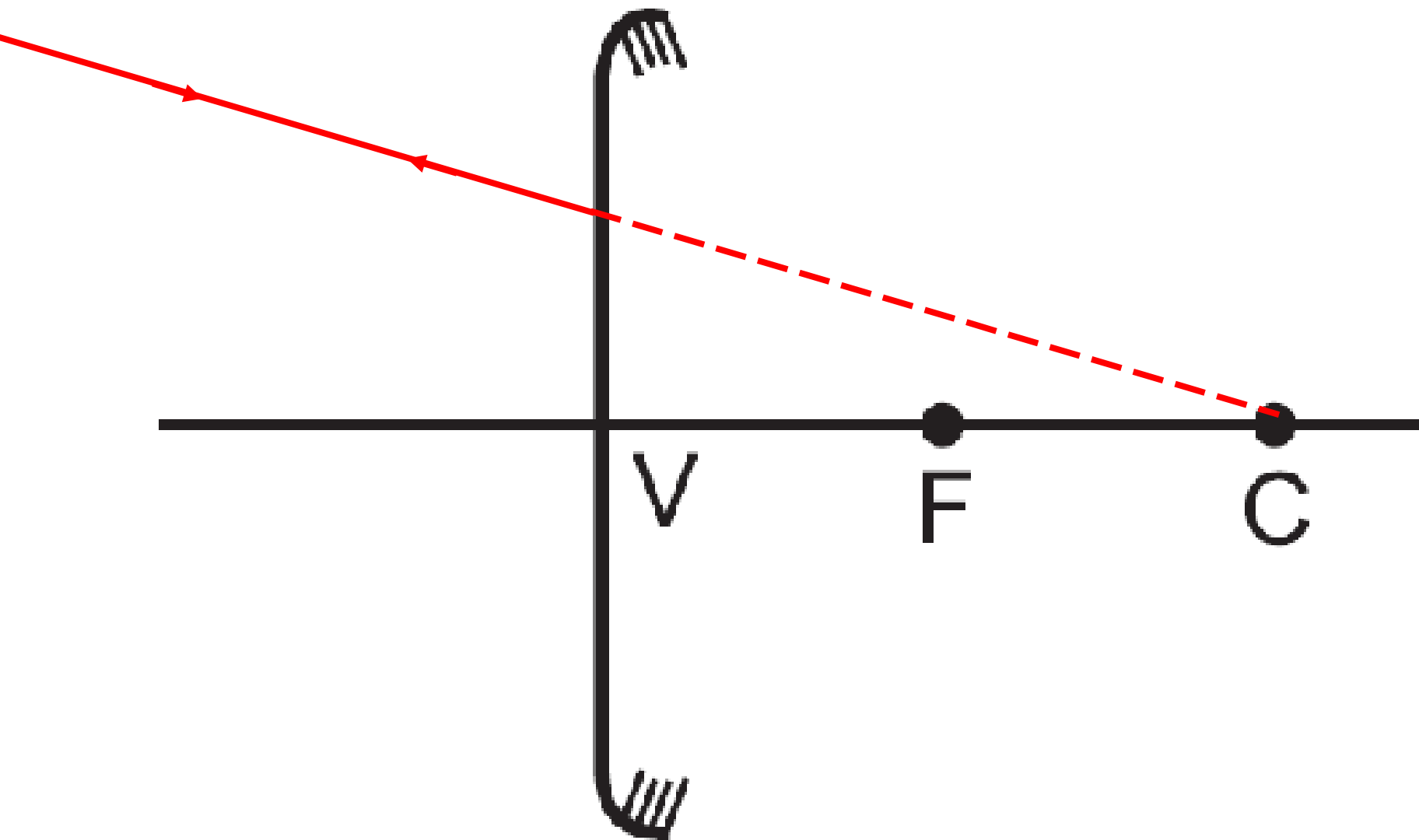


FIGURA 10: RAIOS INCIDINDO NO VÉRTICE V

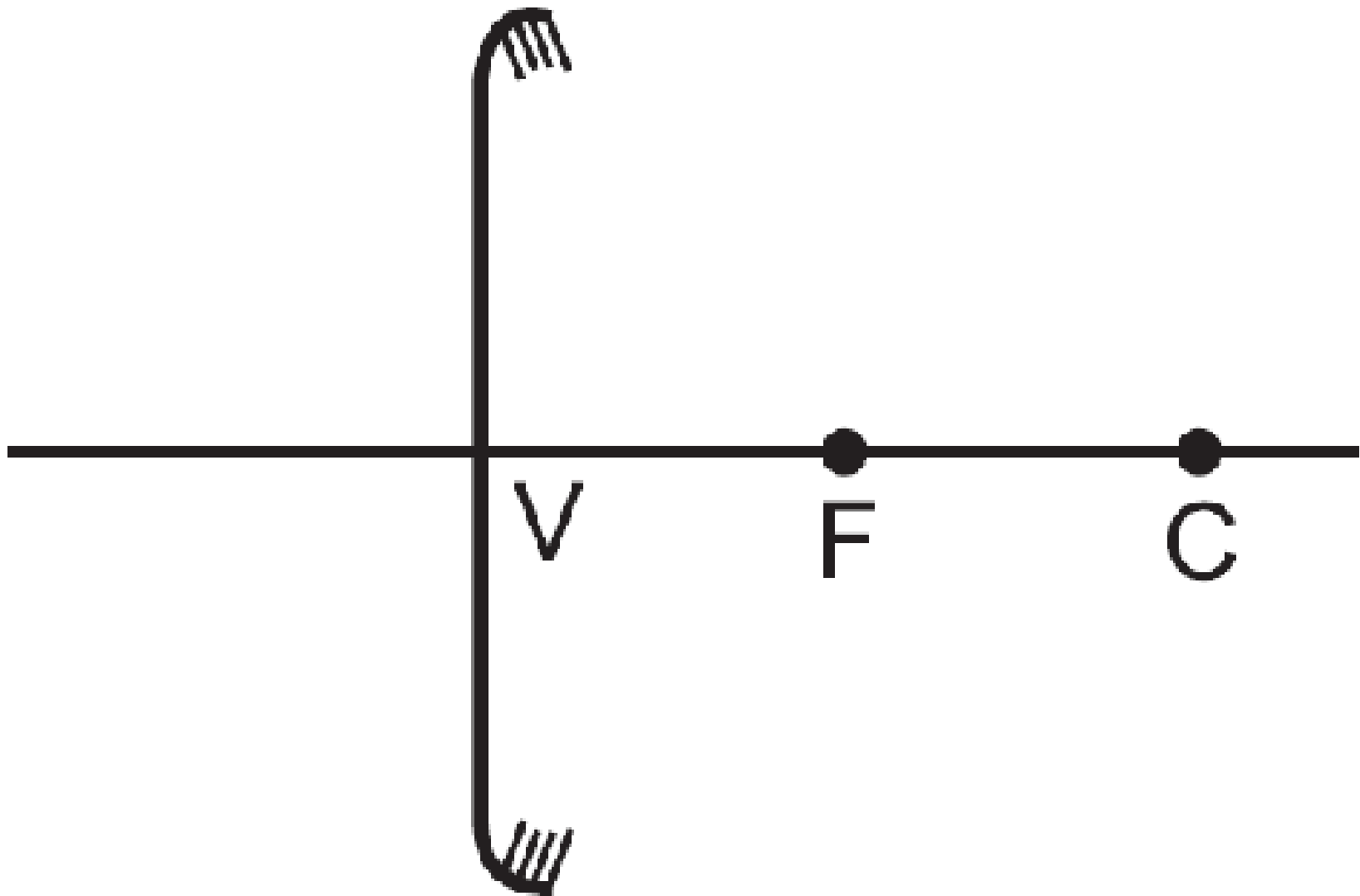


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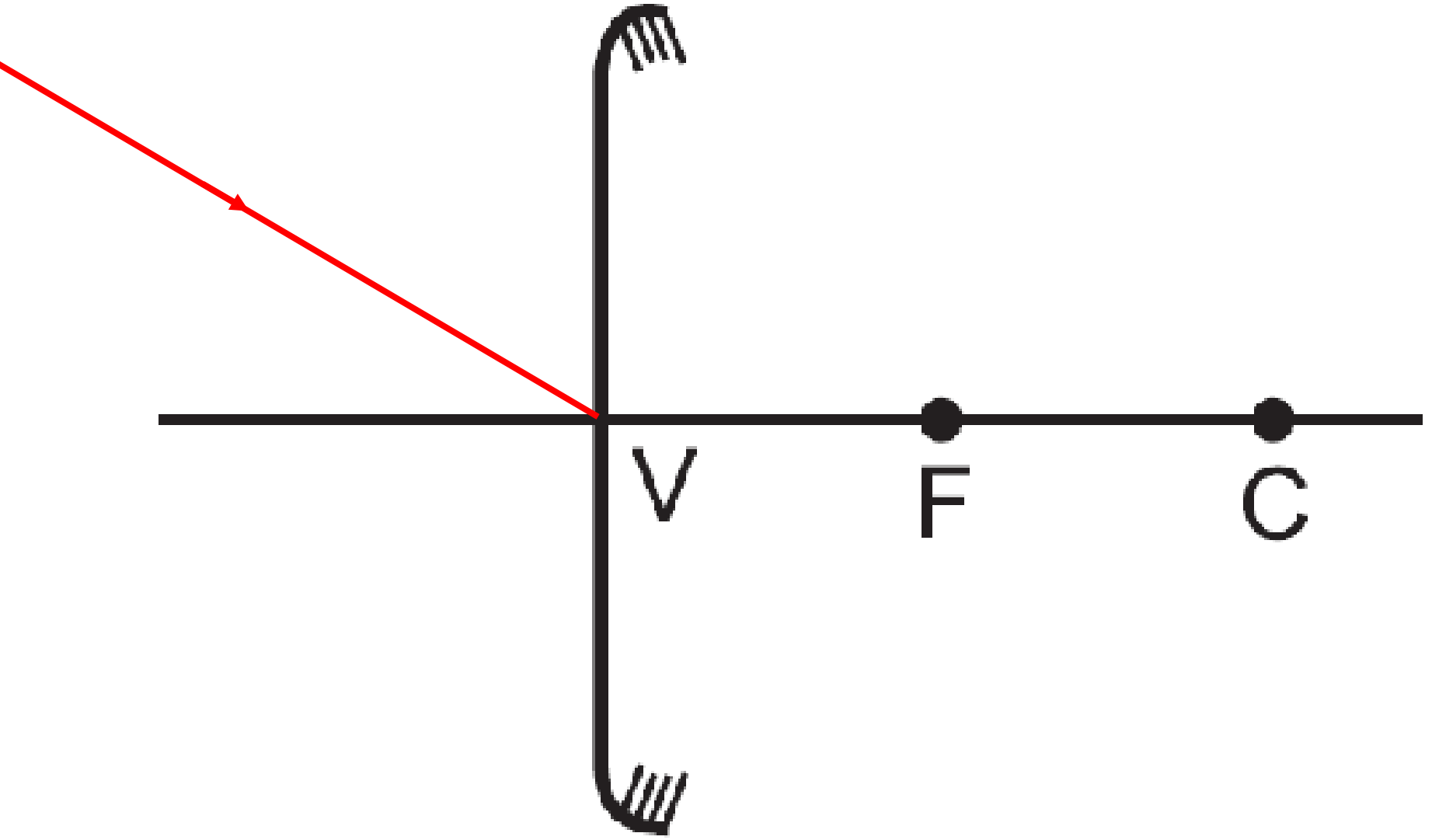


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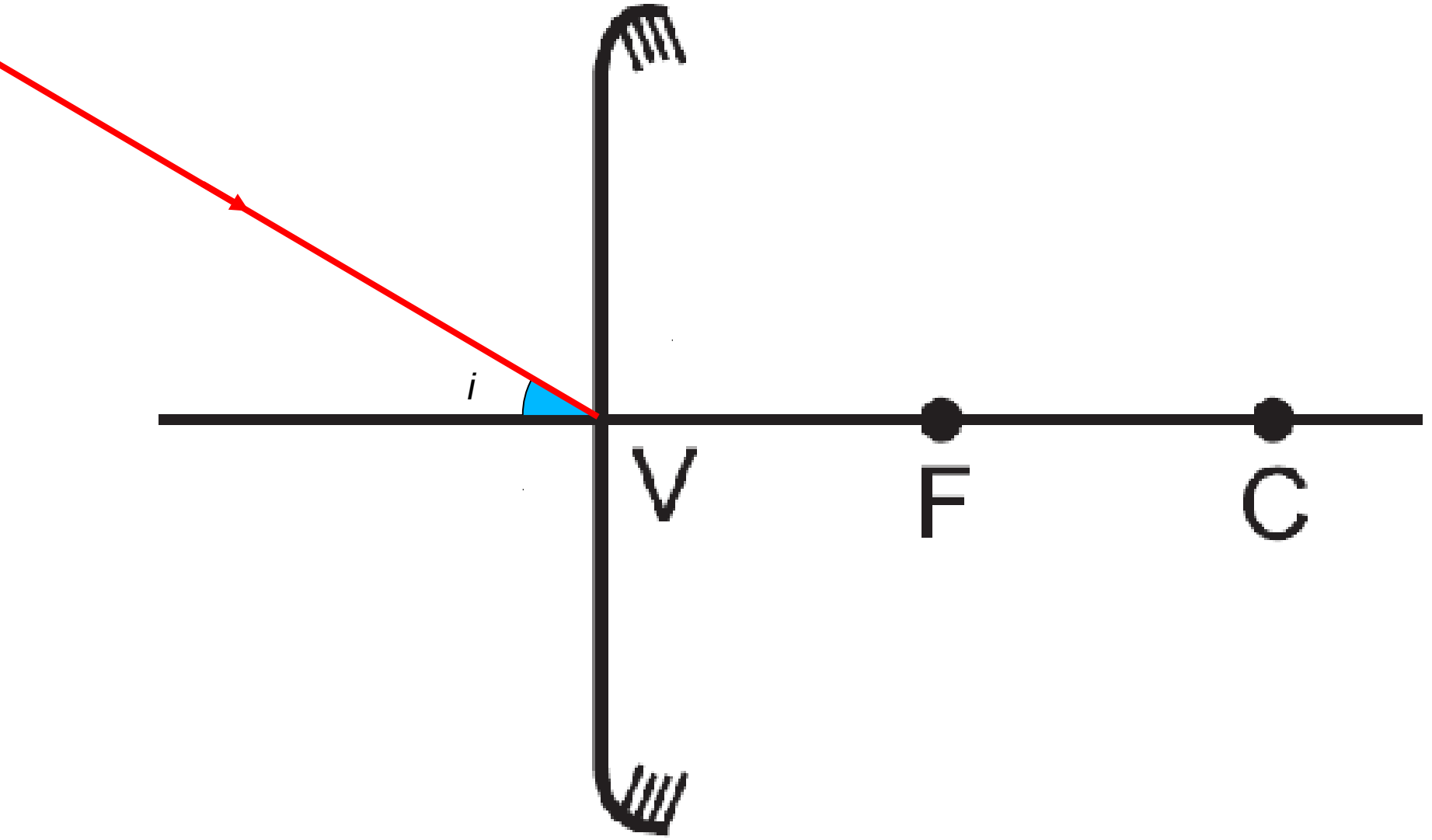


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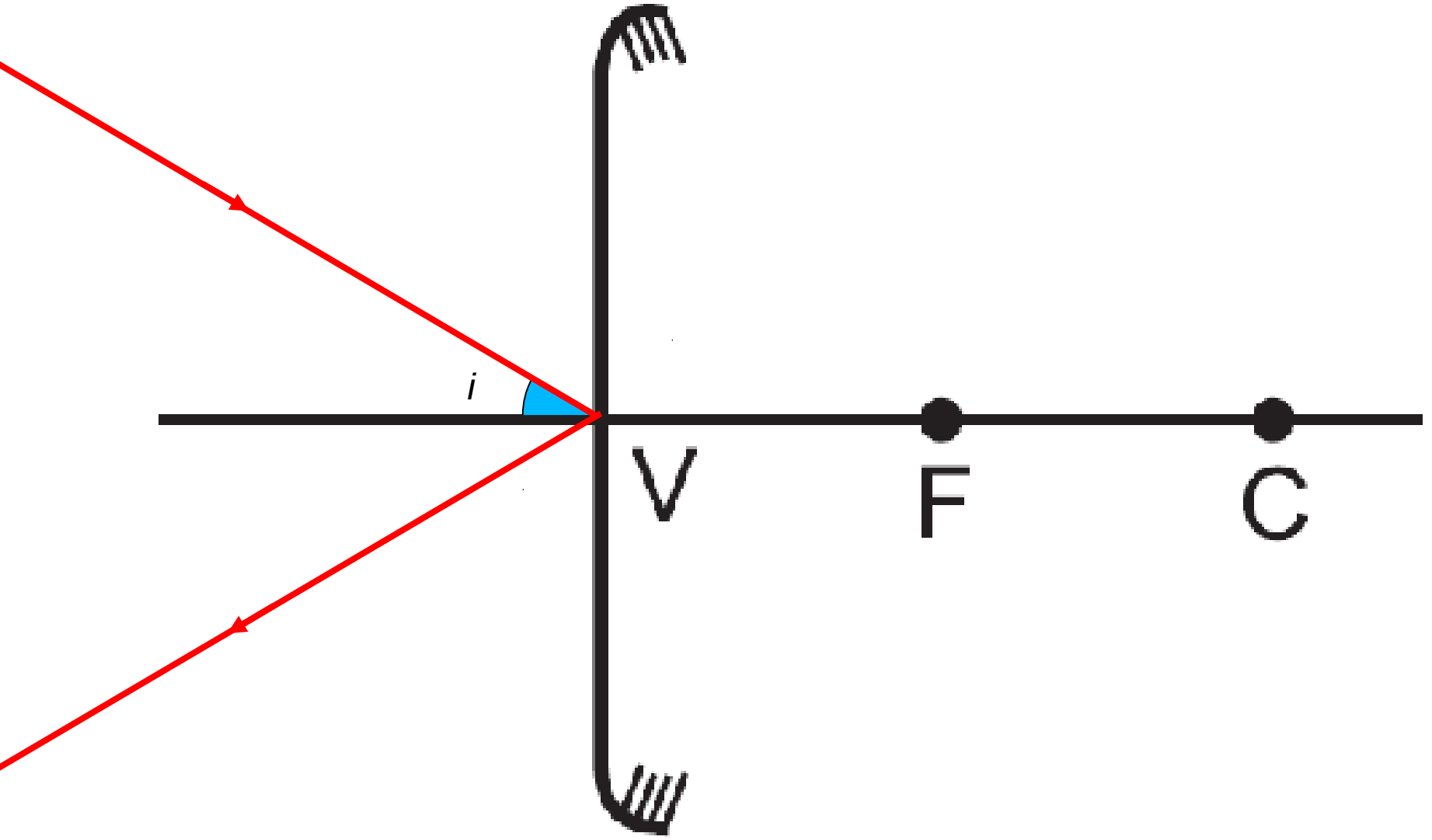
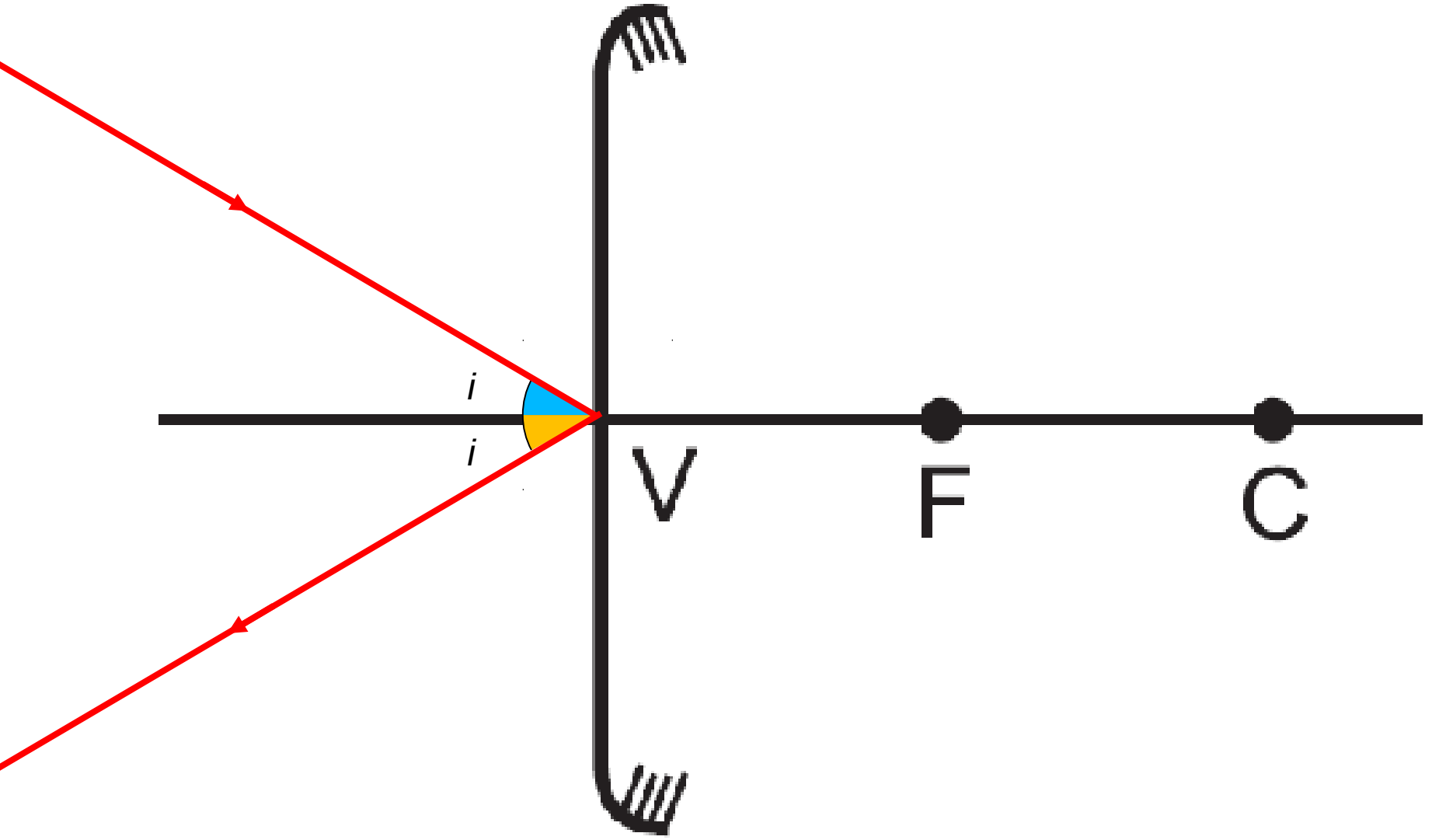


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FORMAÇÃO DE IMAGEM: CONSTRUÇÃO GEOMÉTRICA



Espelhos Côncavos

FIGURA 11: OBJETO ALÉM DO CENTRO DE CURVATURA C

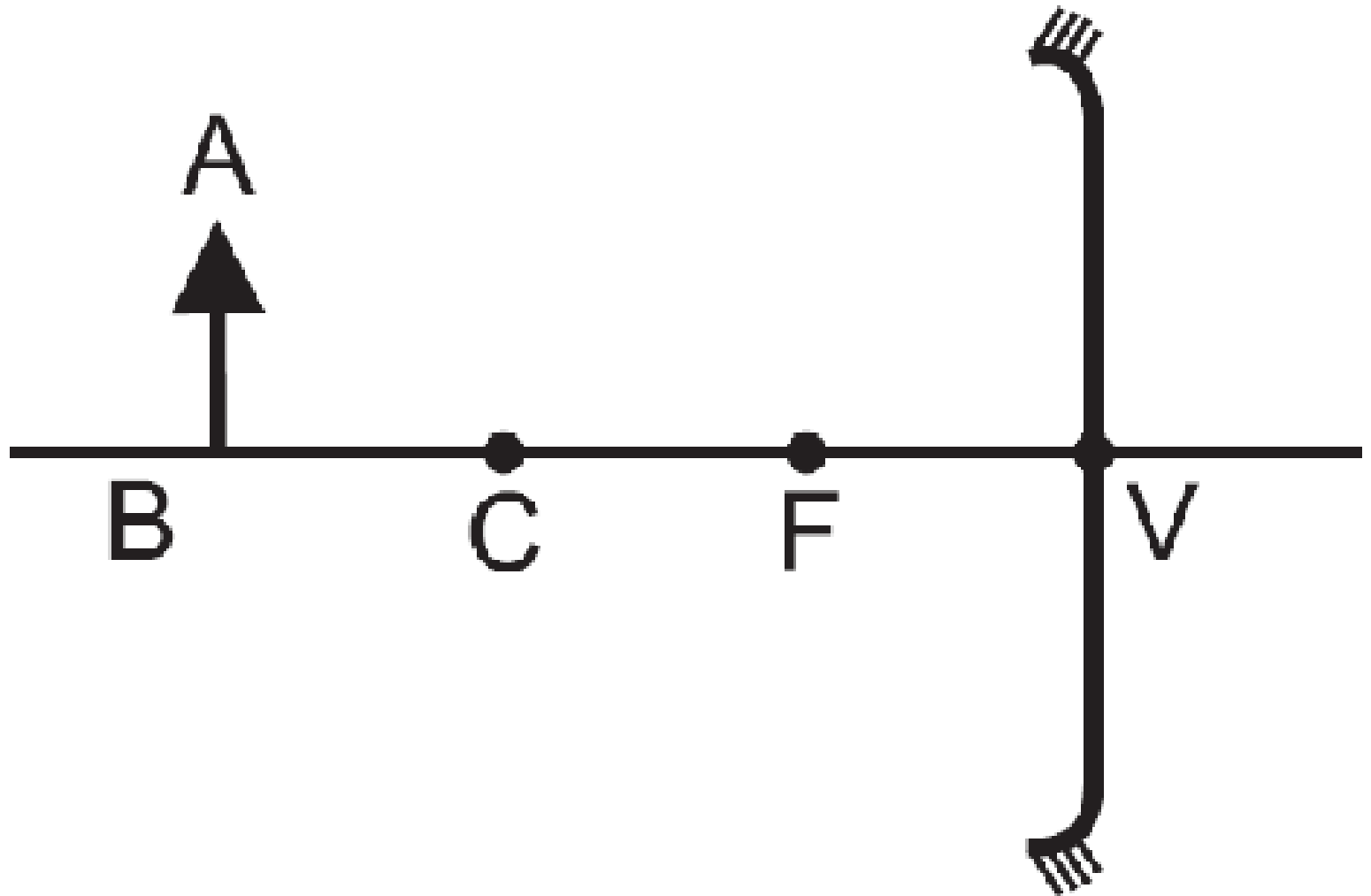


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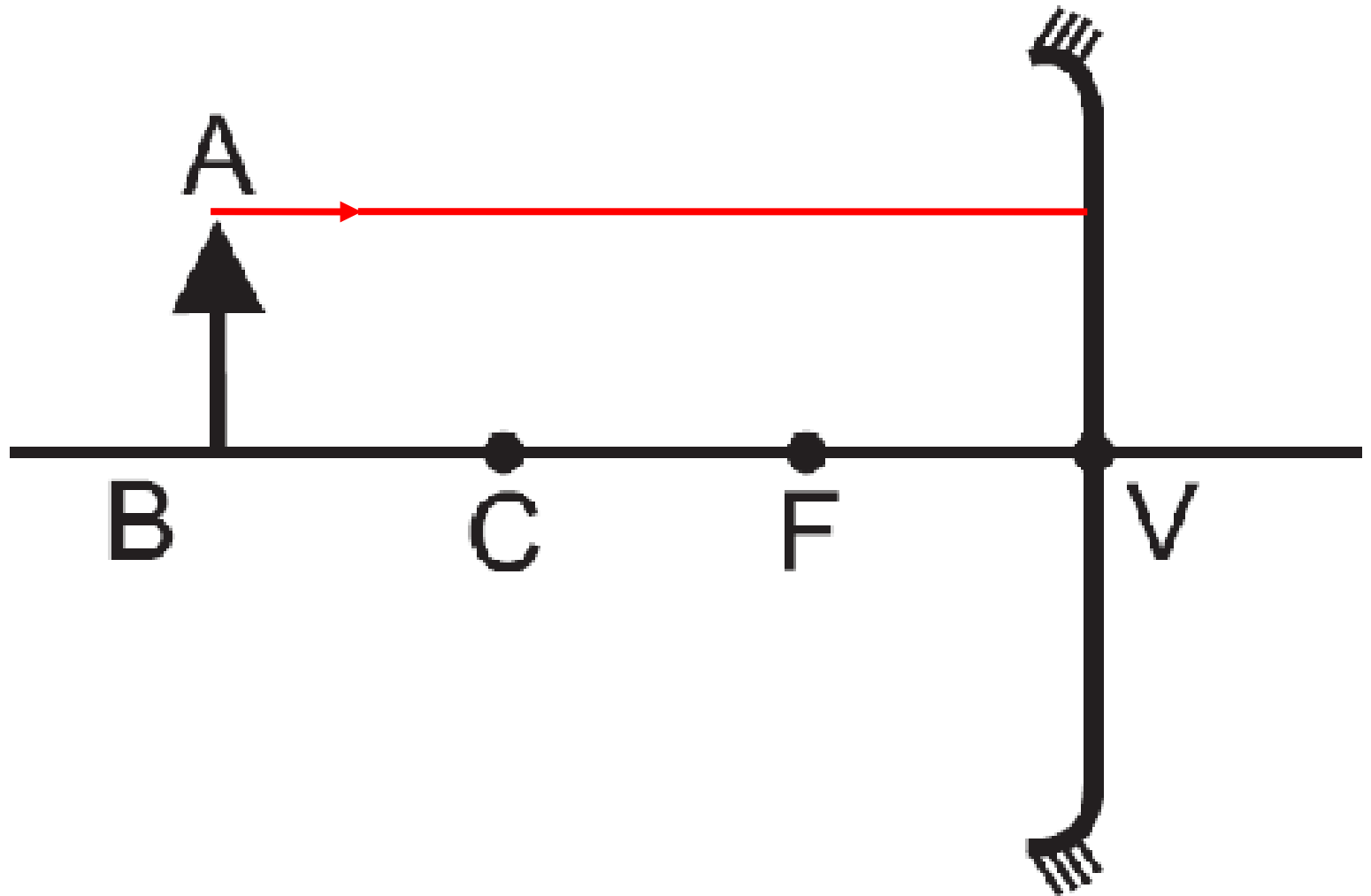


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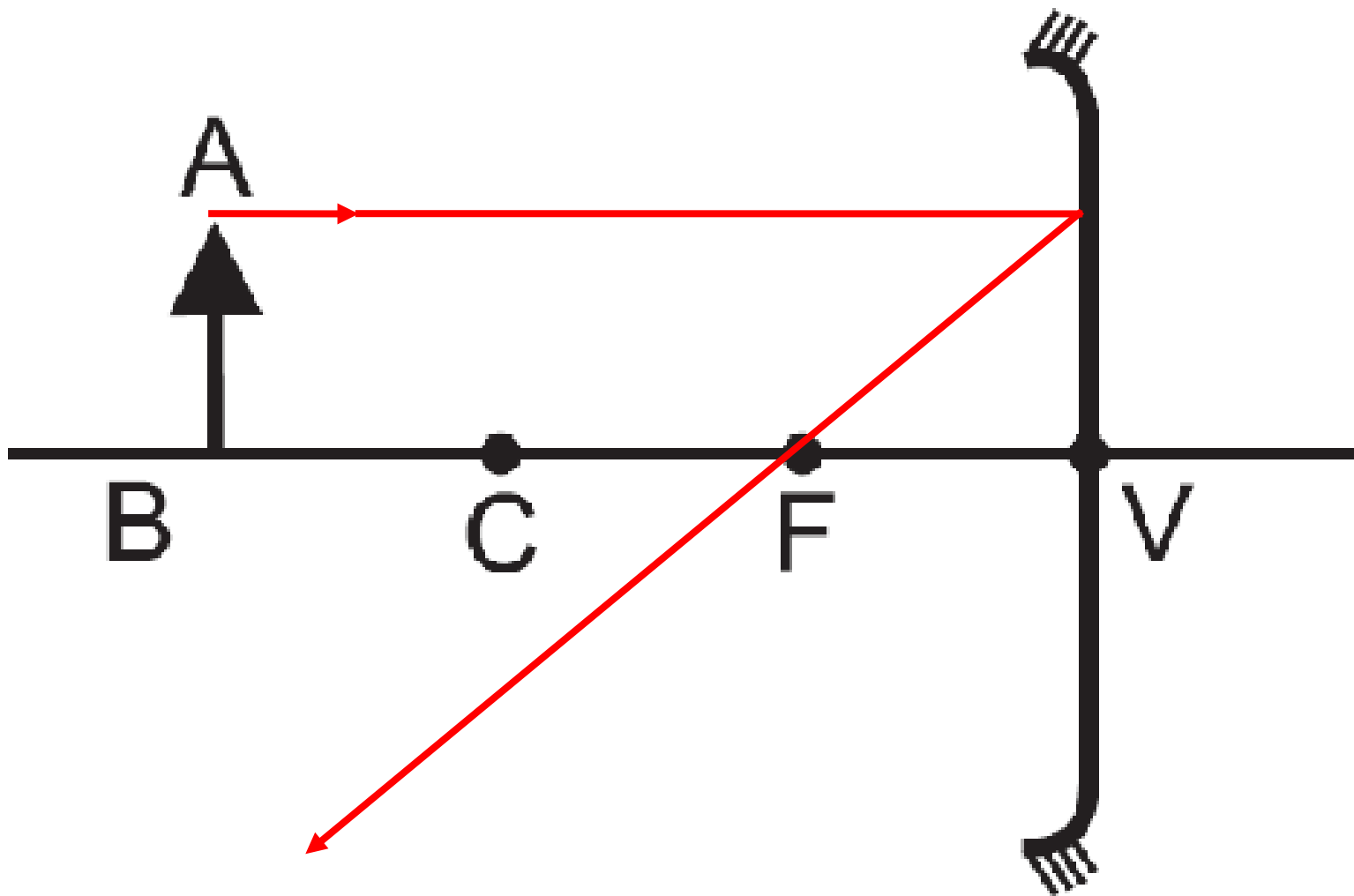


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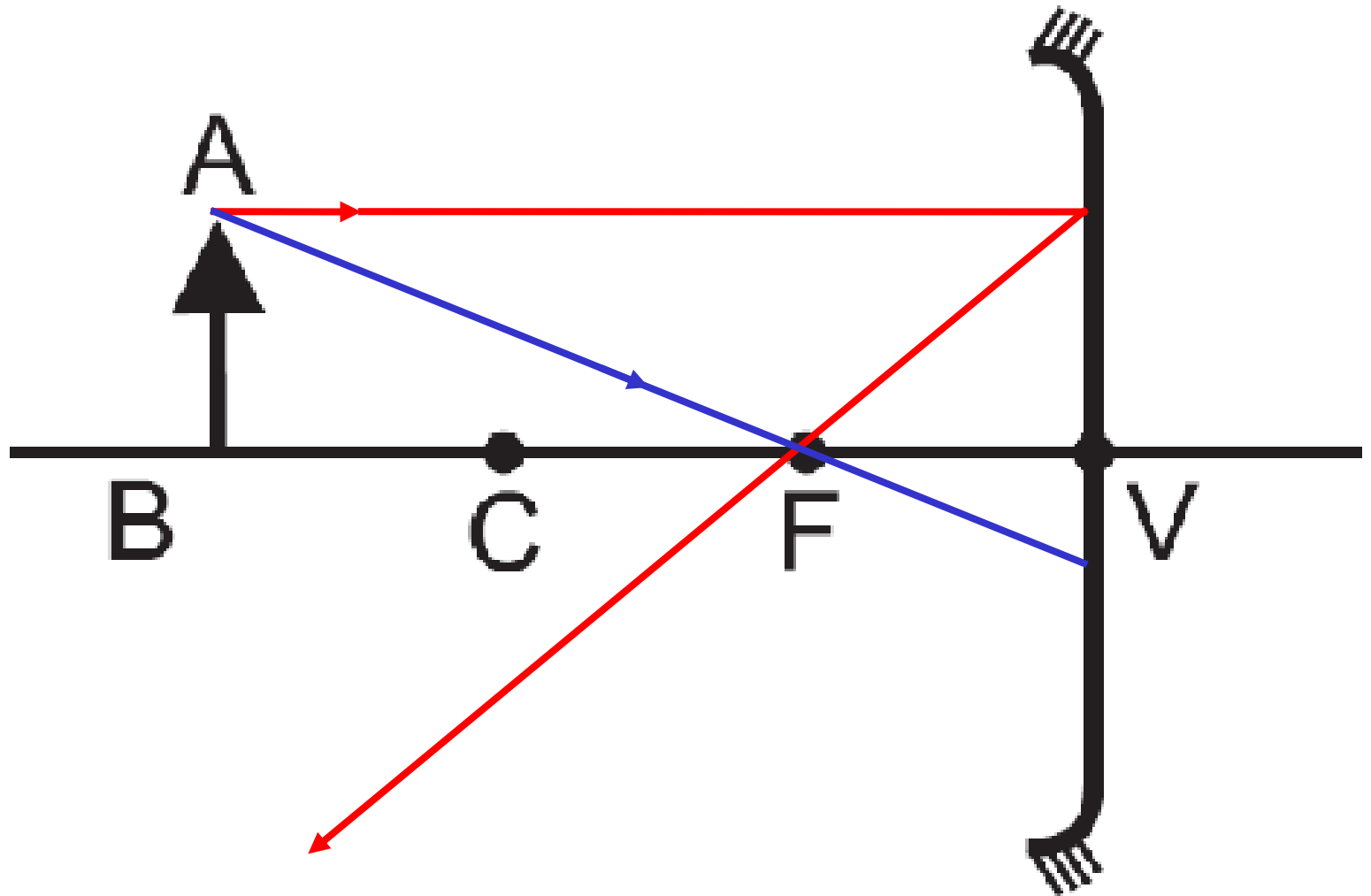


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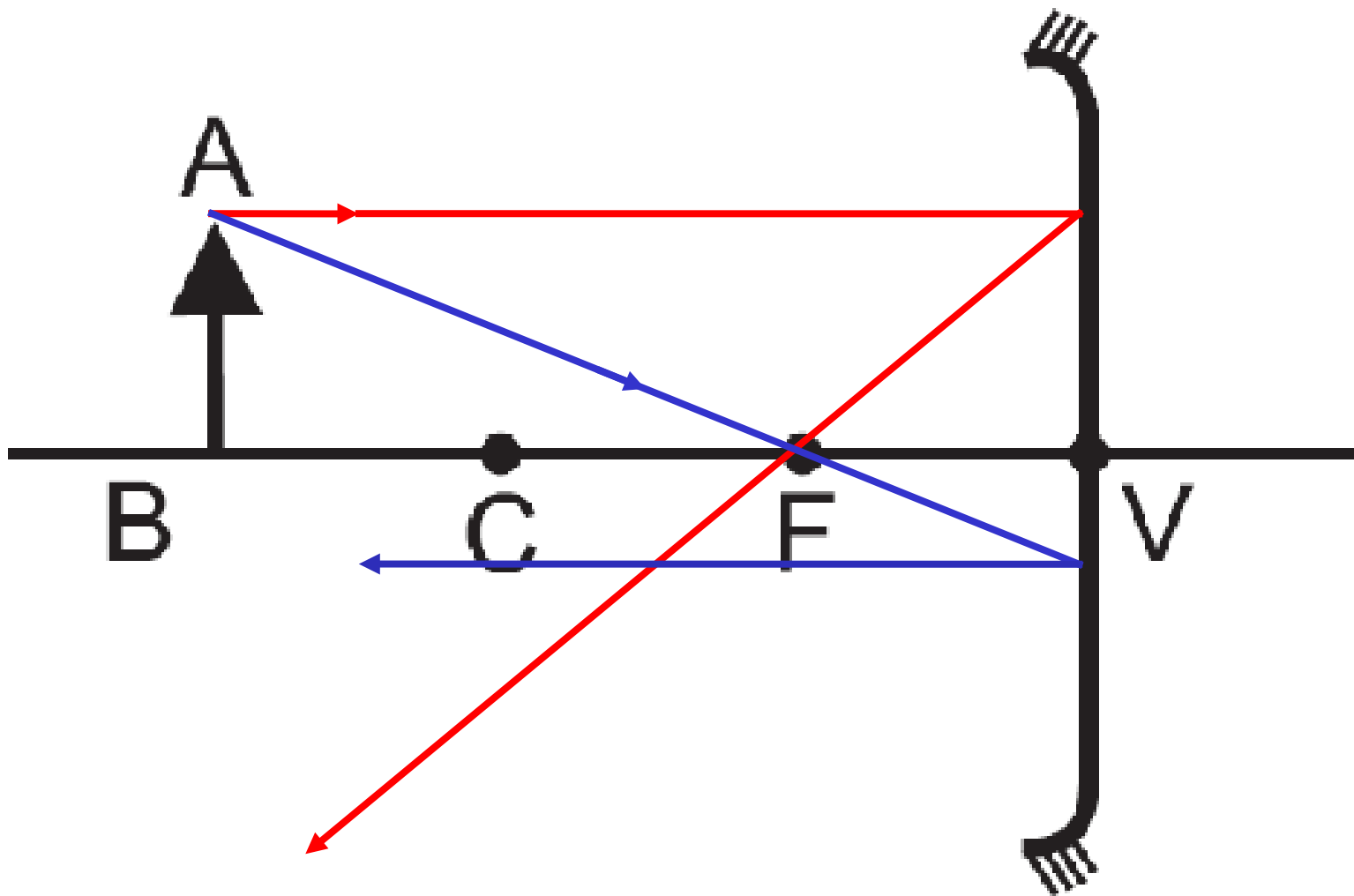


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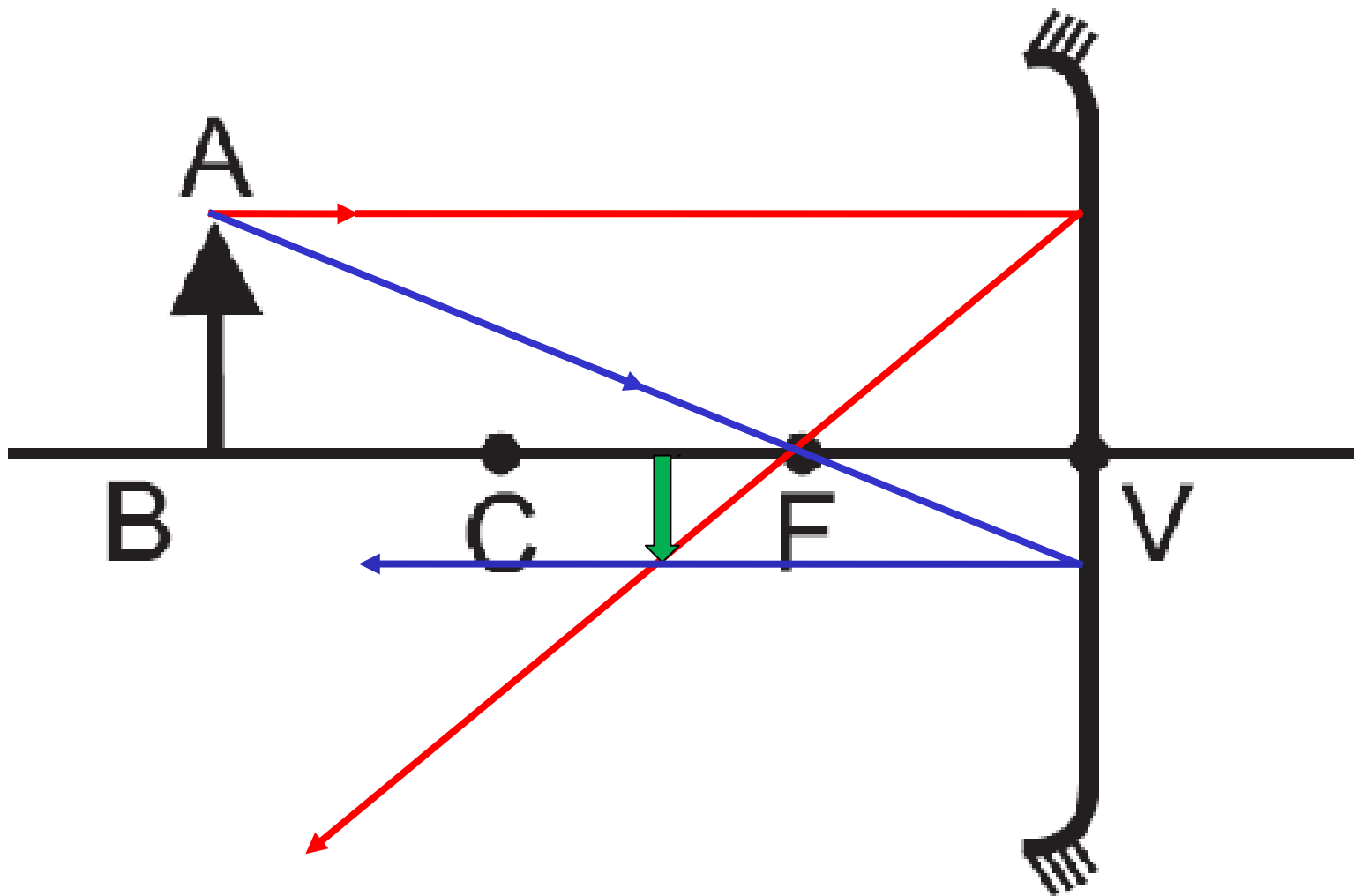


FIGURA 12: OBJETO NO CENTRO DE CURVATURA C

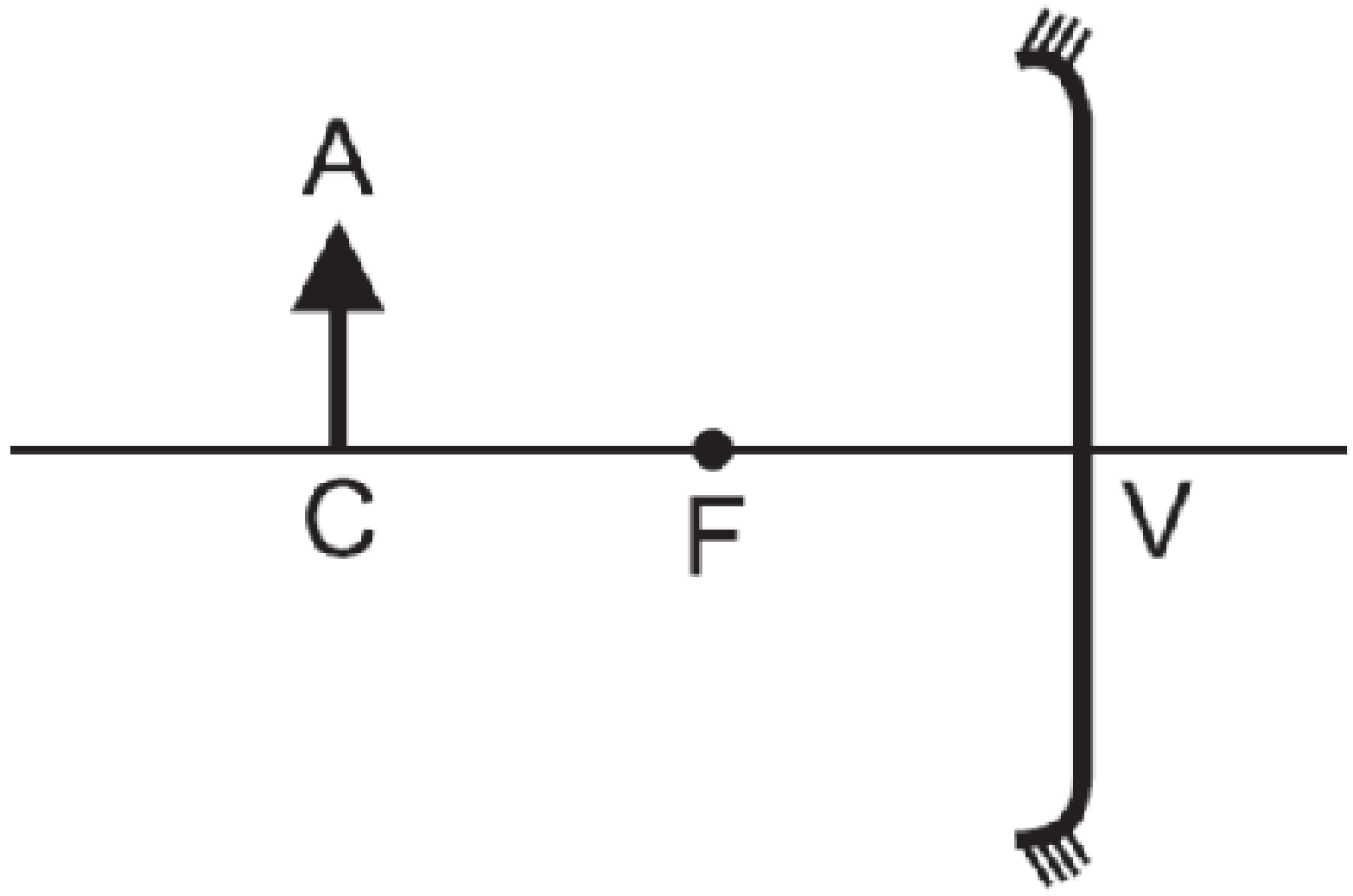


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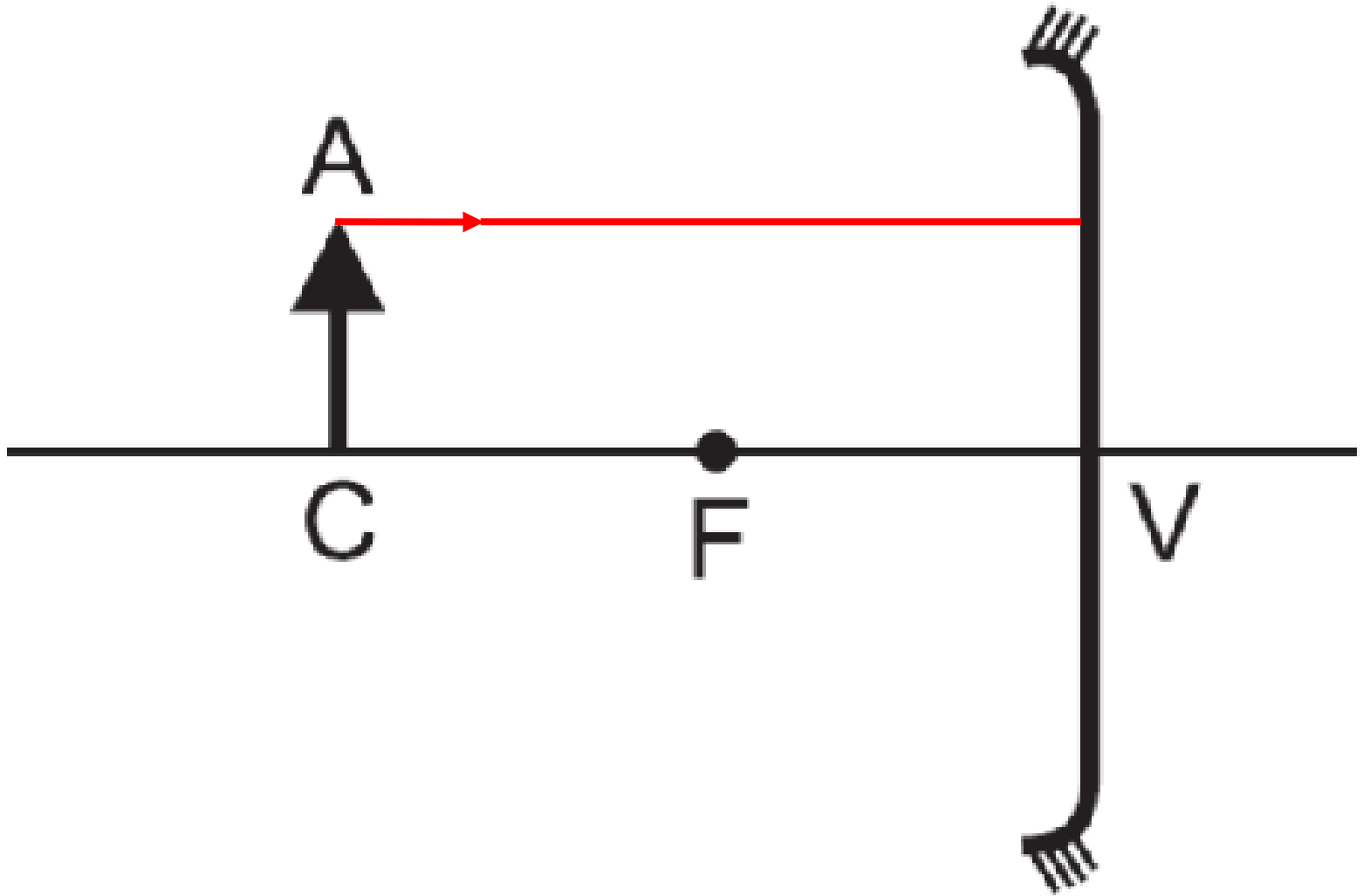


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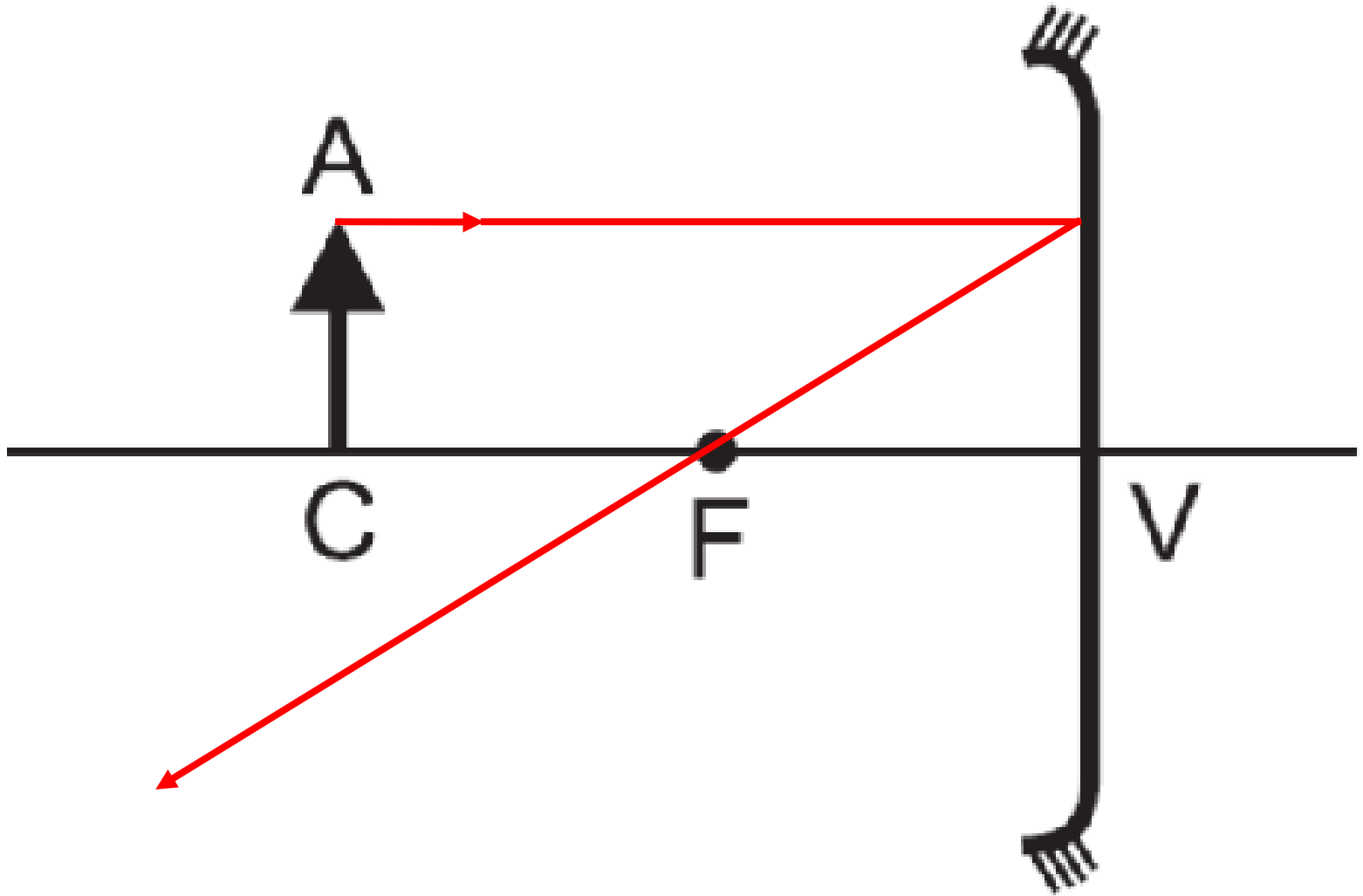


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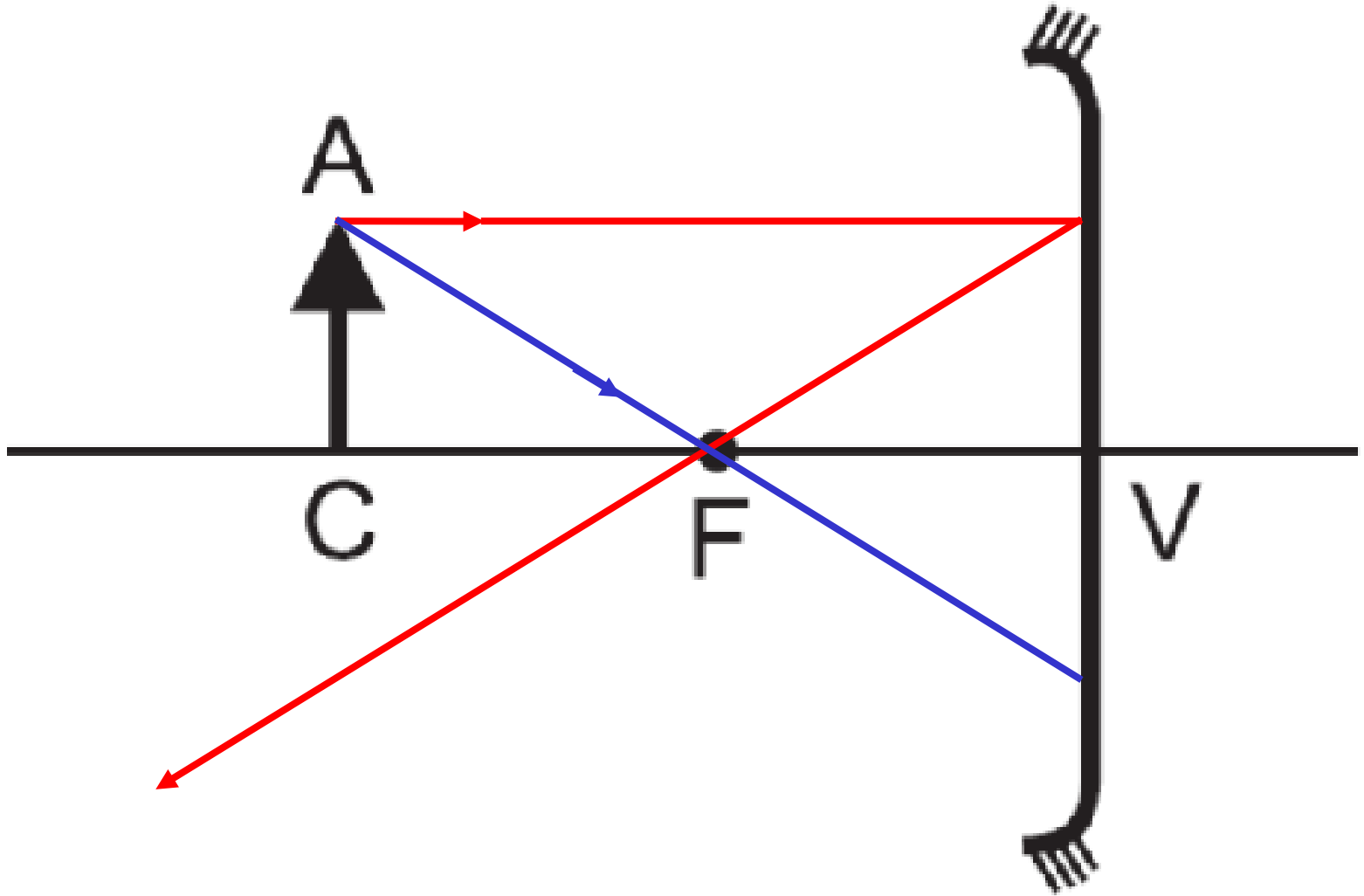


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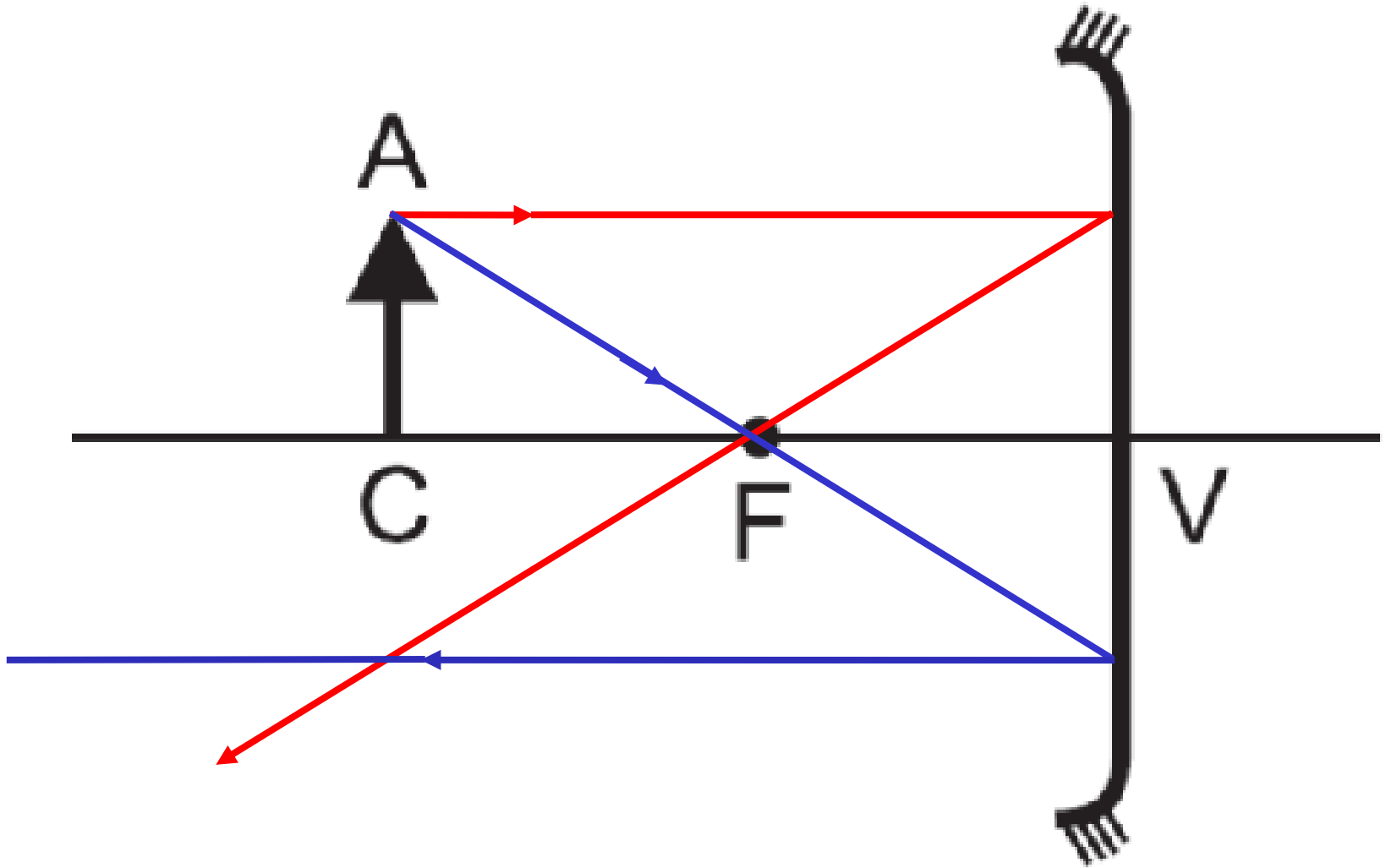


FIGURA 12: OBJETO NO CENTRO DE CURVATURA C

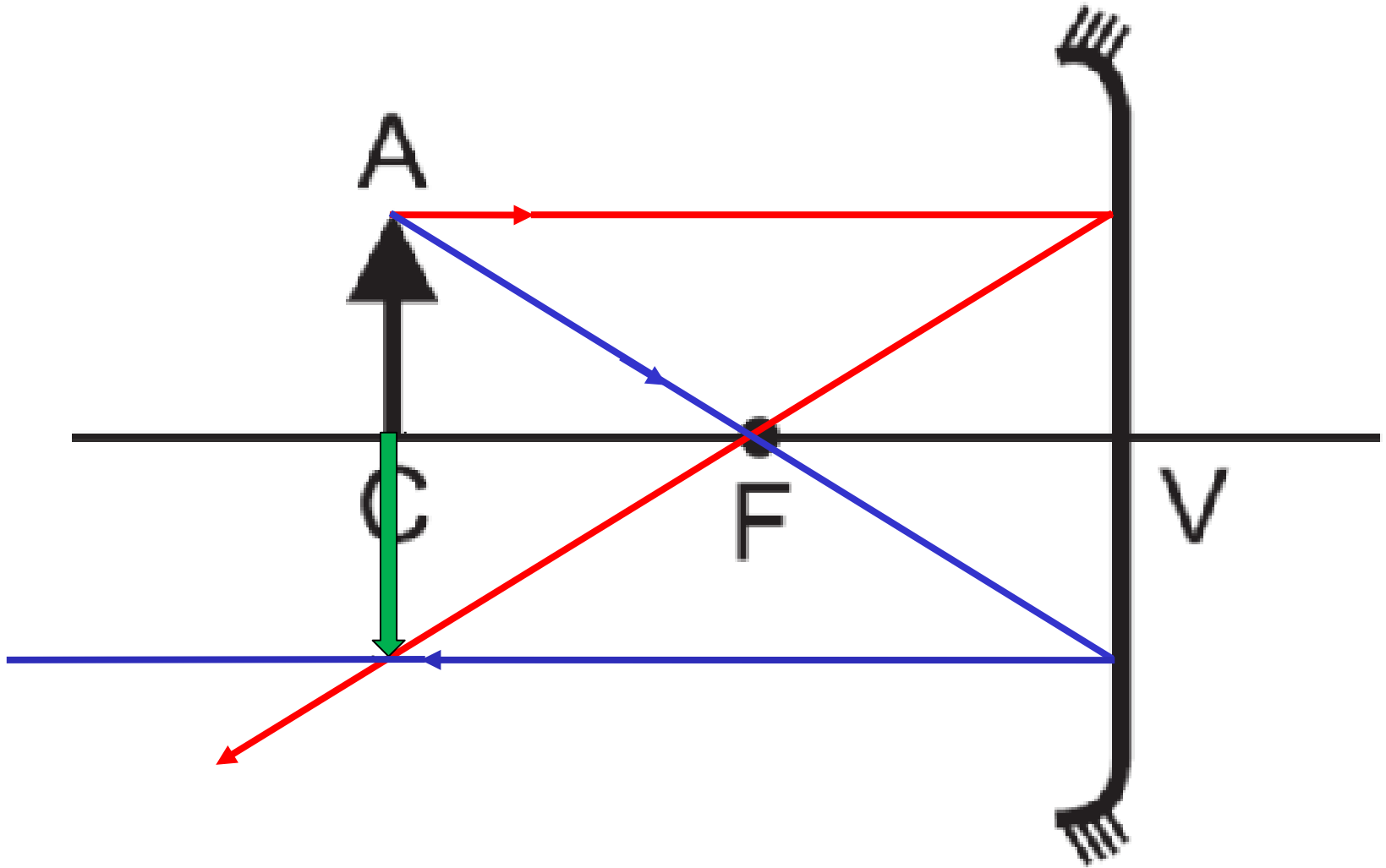


FIGURA 13: OBJETO ENTRE O CENTRO DE CURVATURA C E O FOCO F

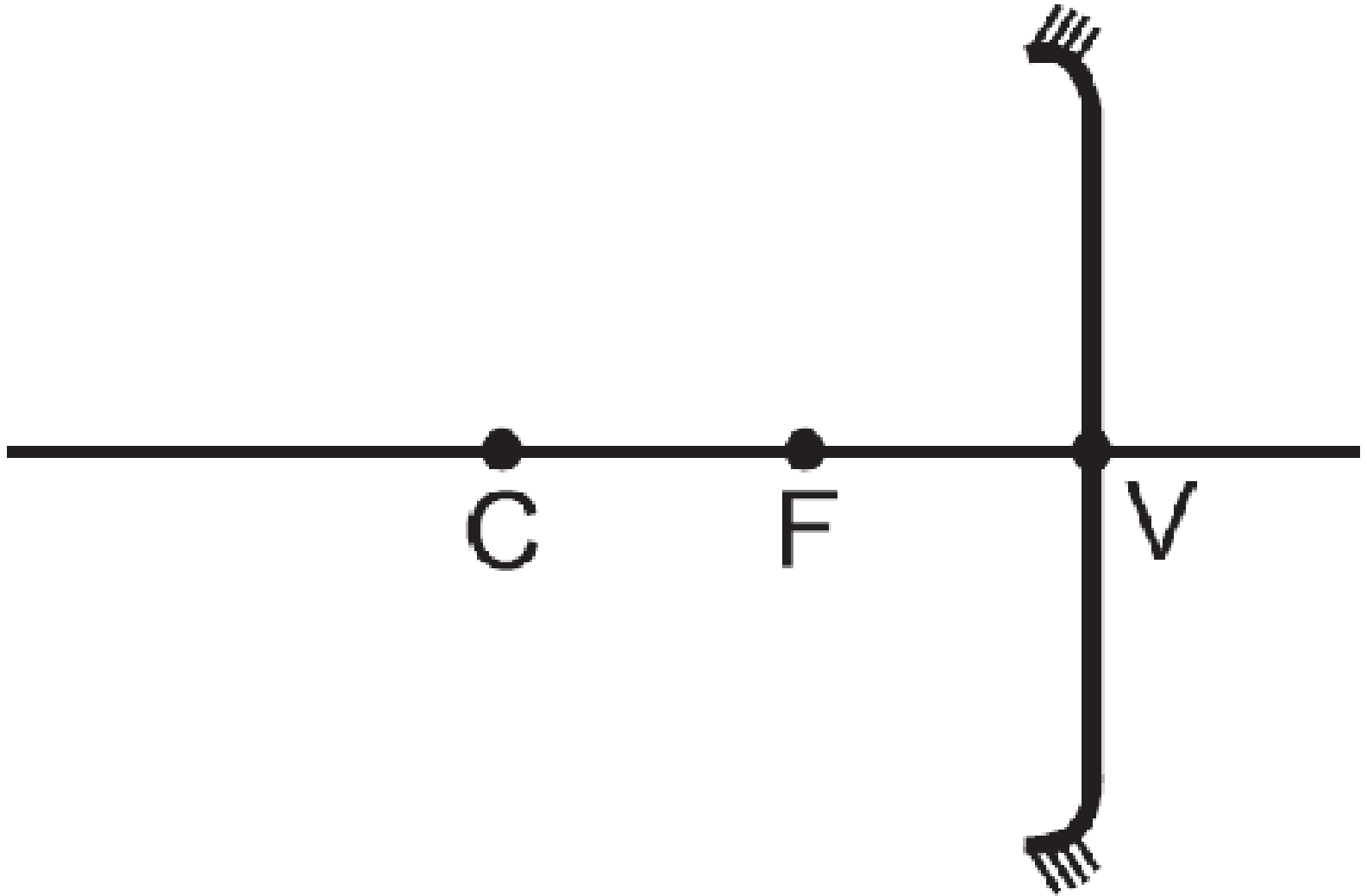


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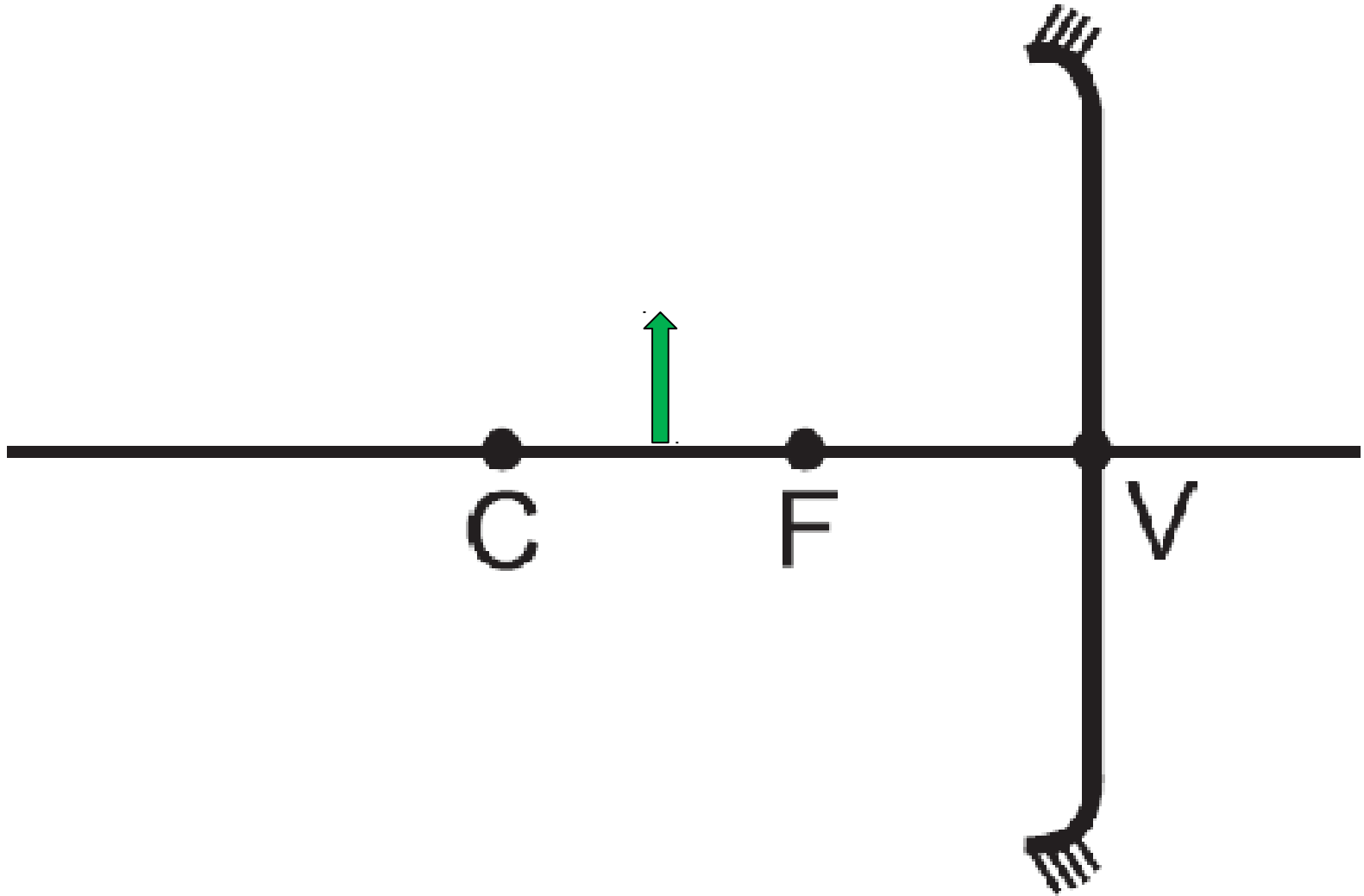


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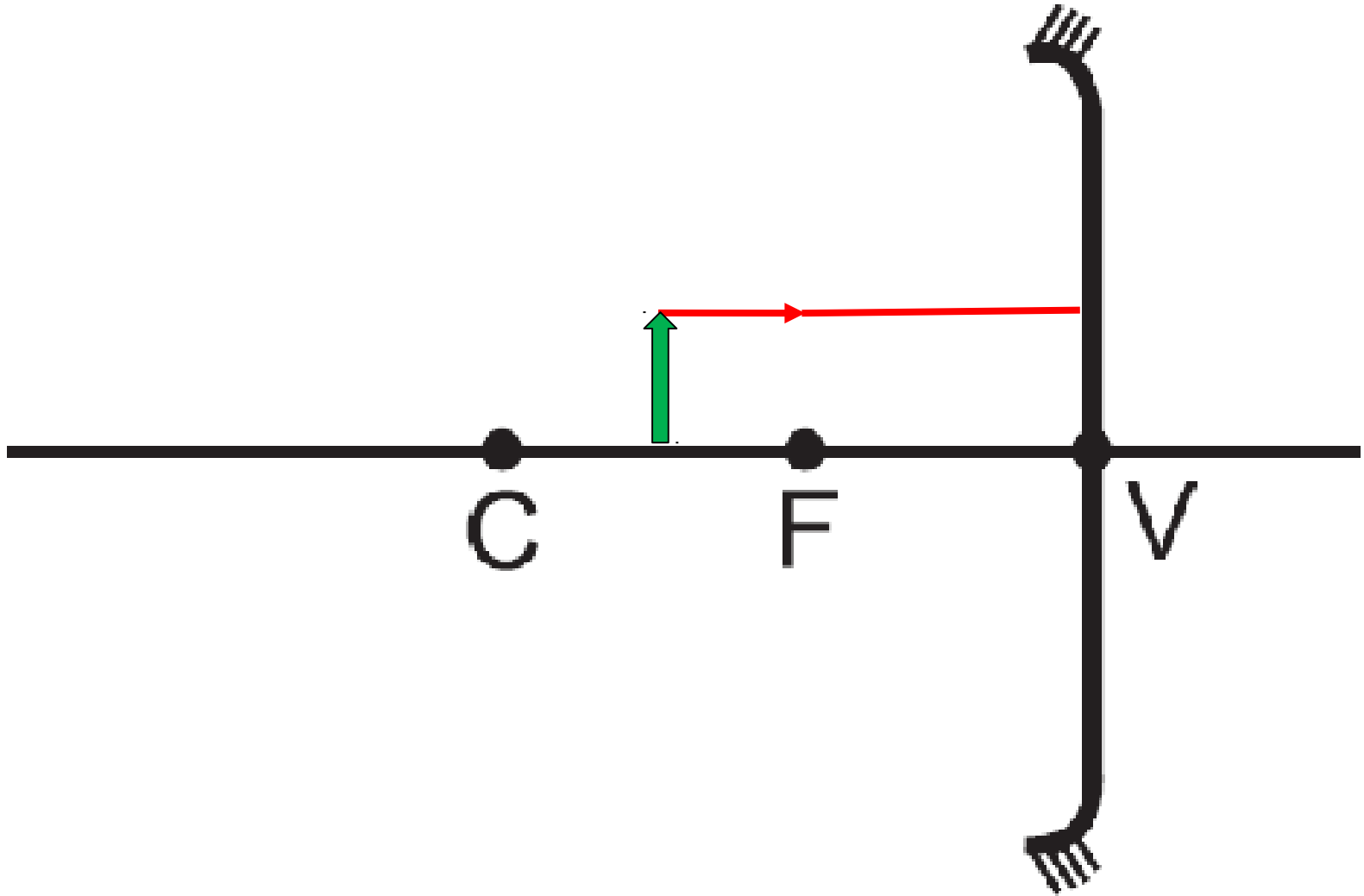


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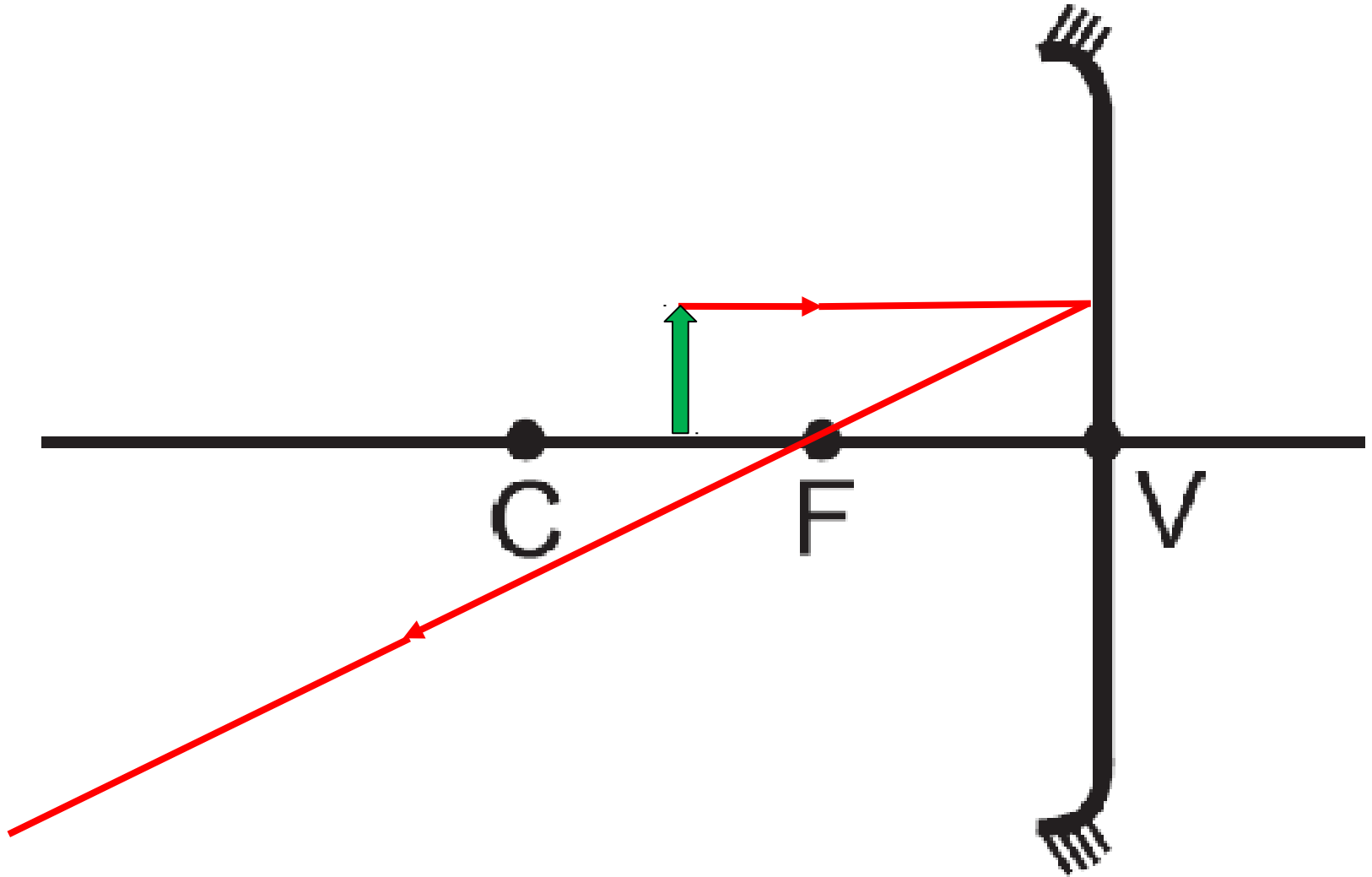


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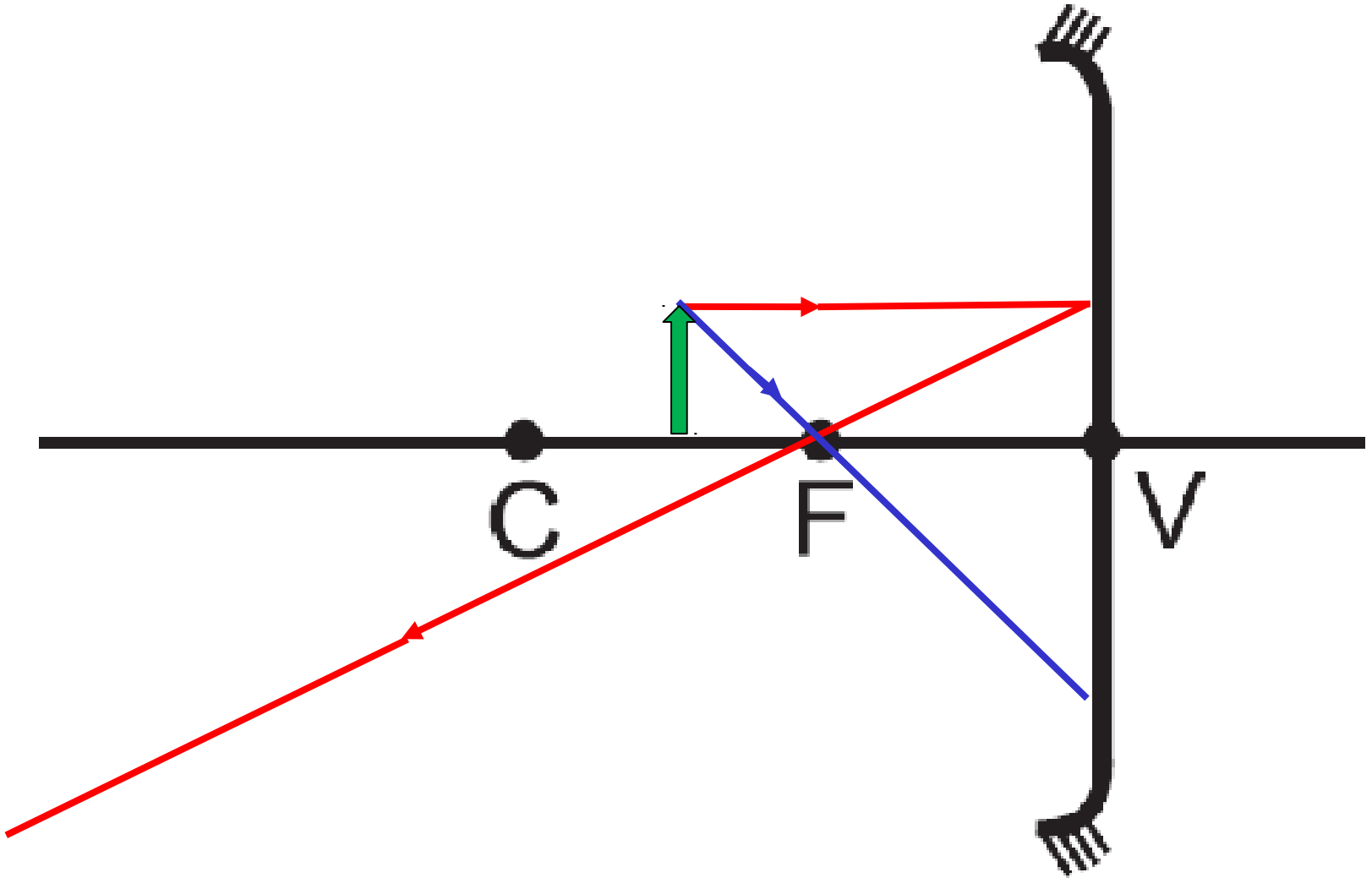


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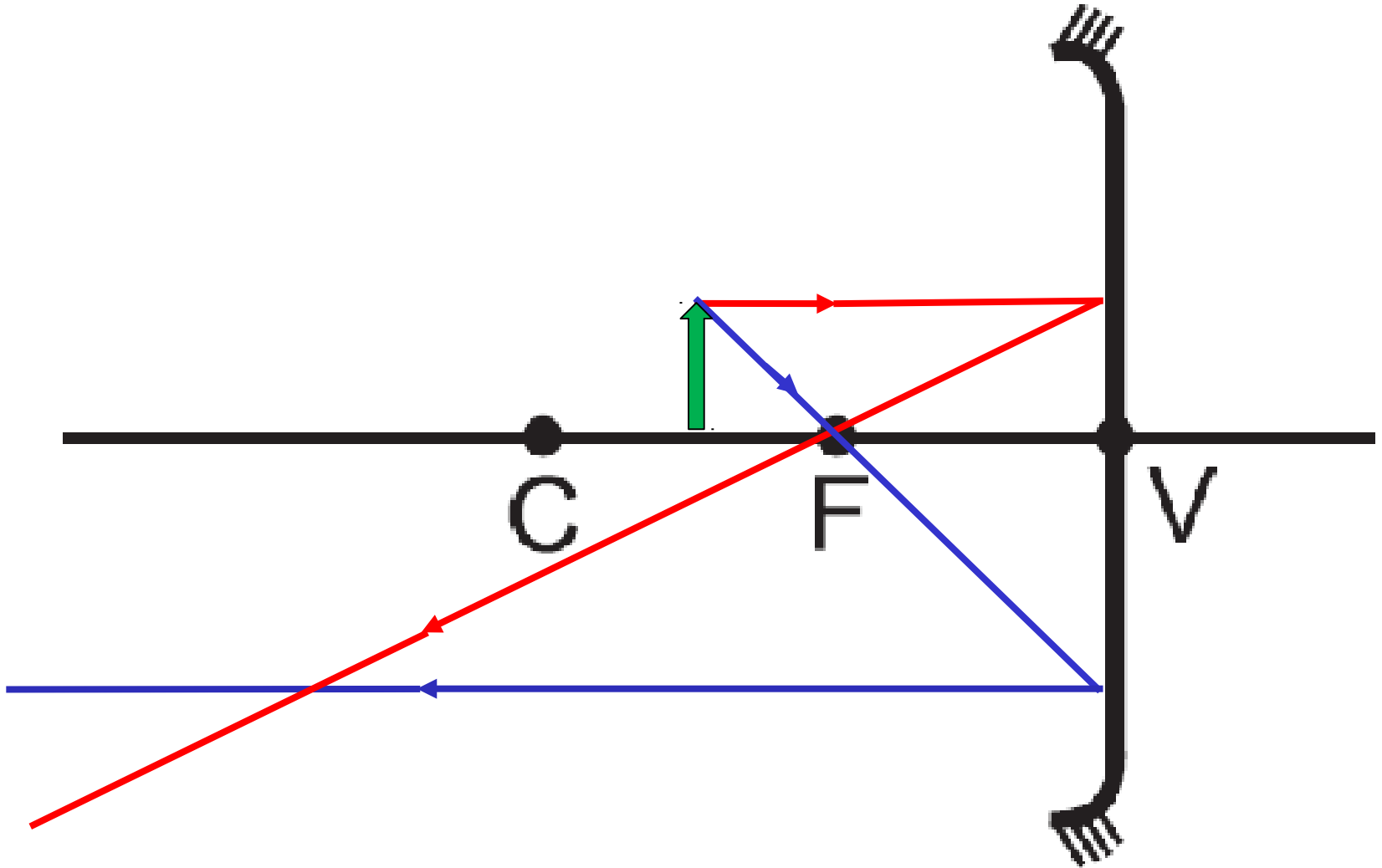


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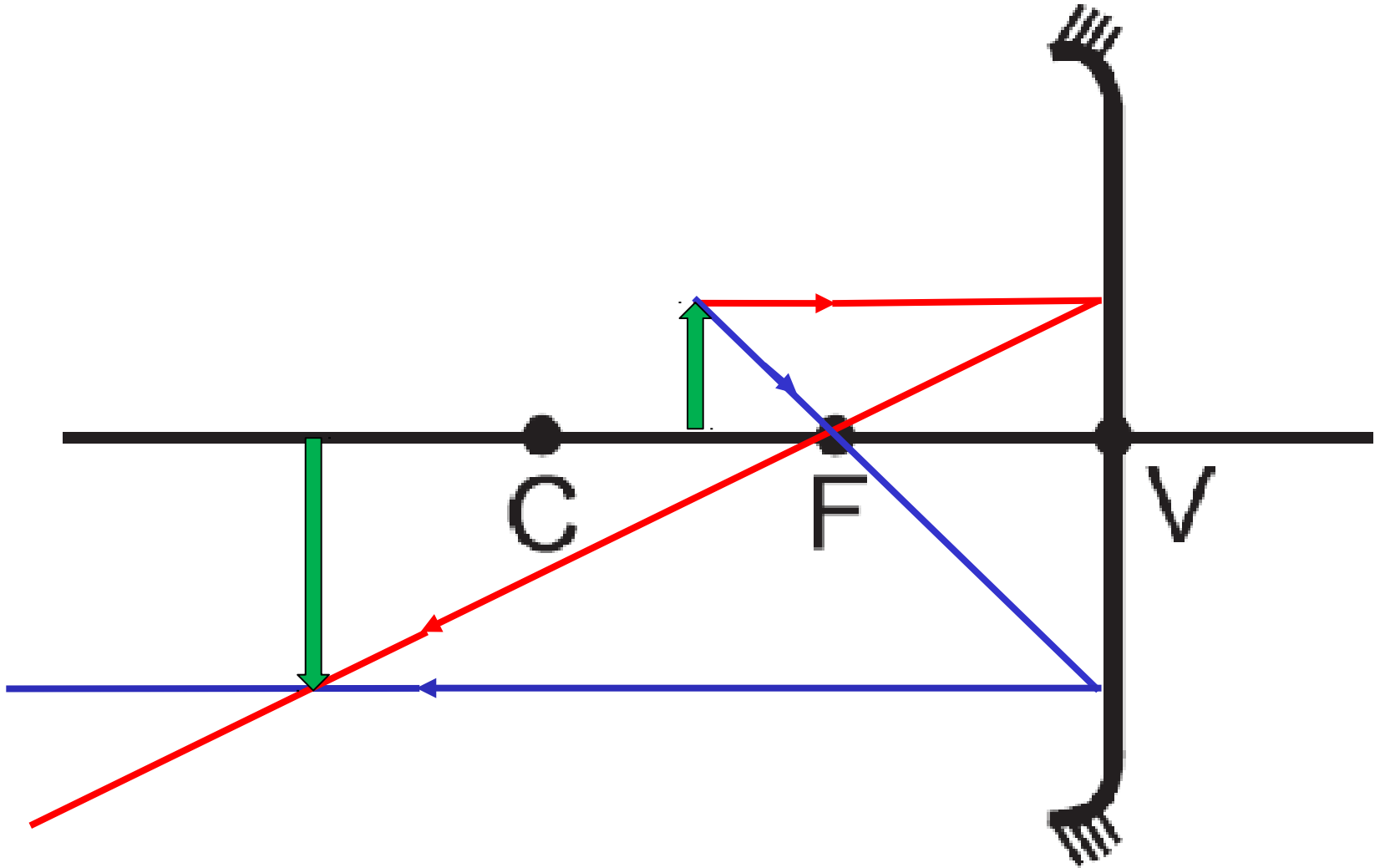


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

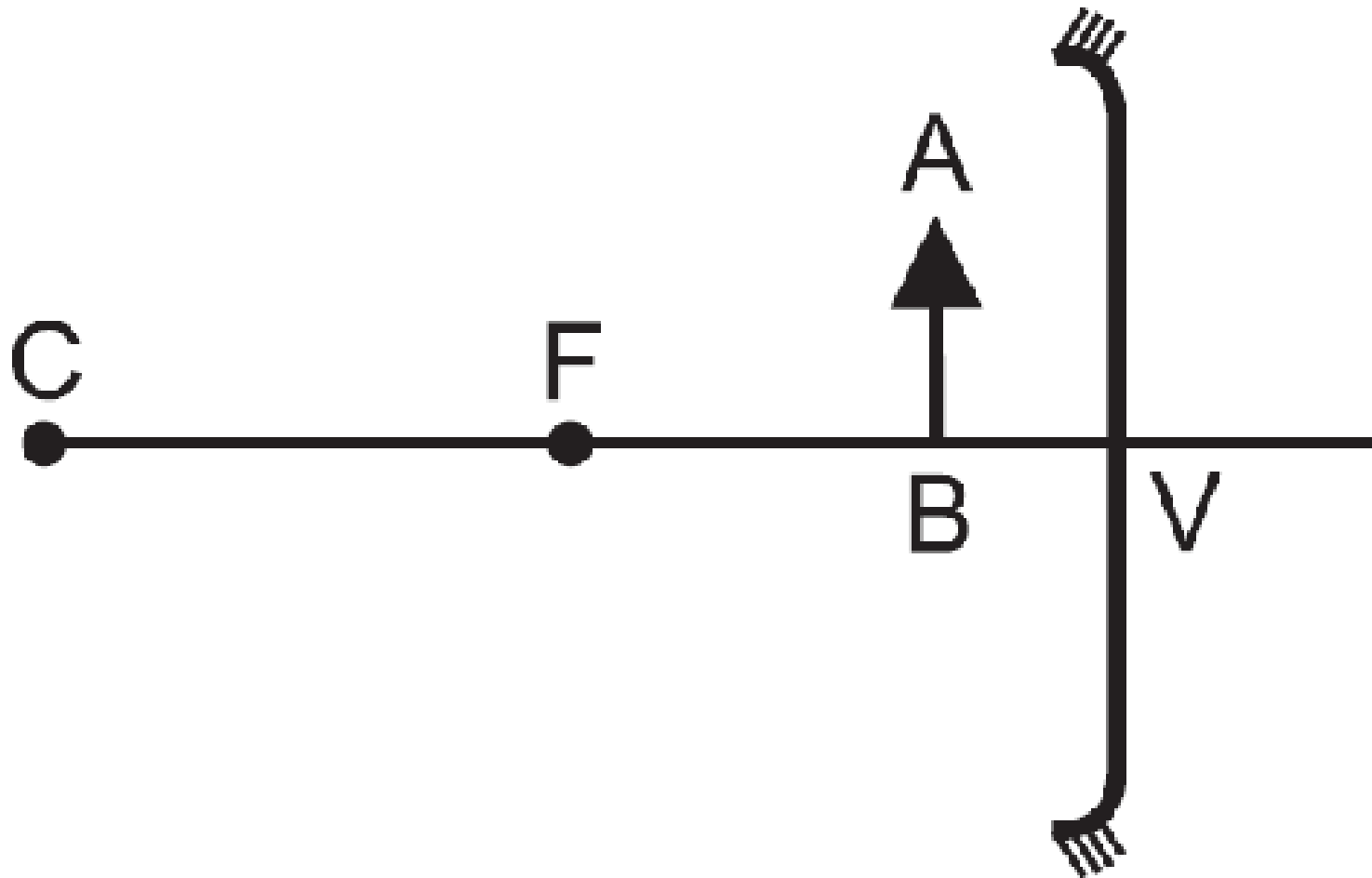


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

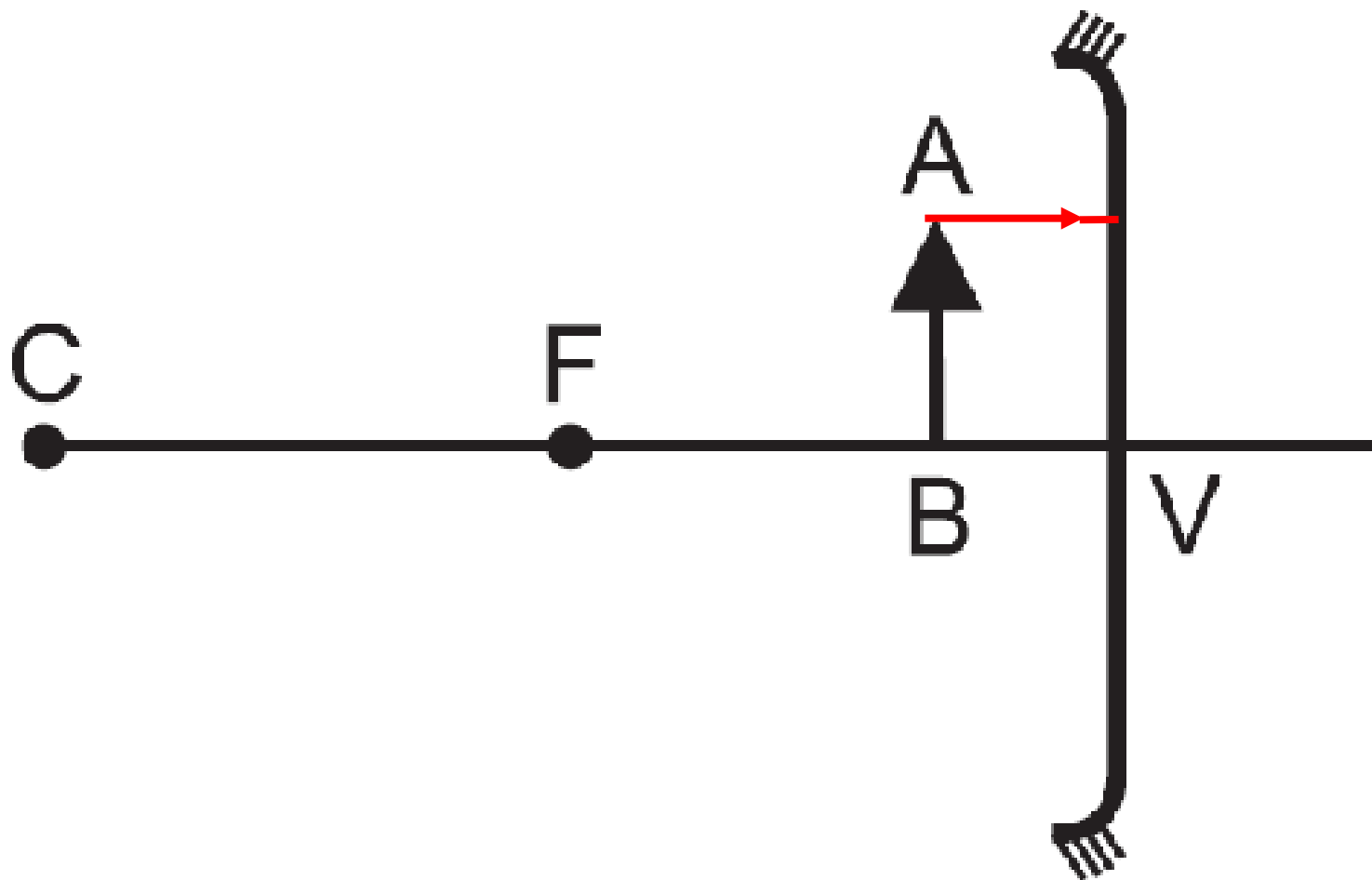


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

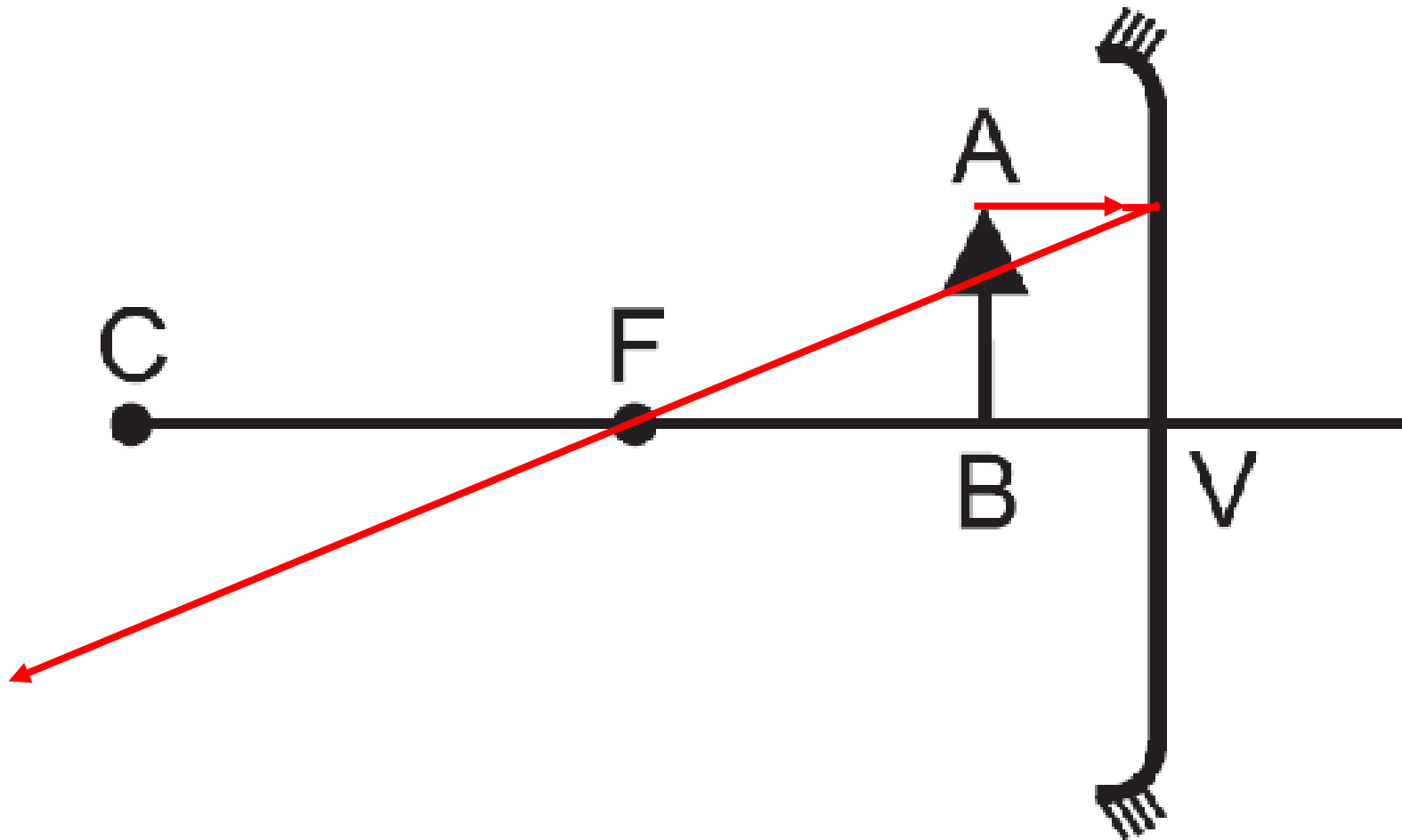


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

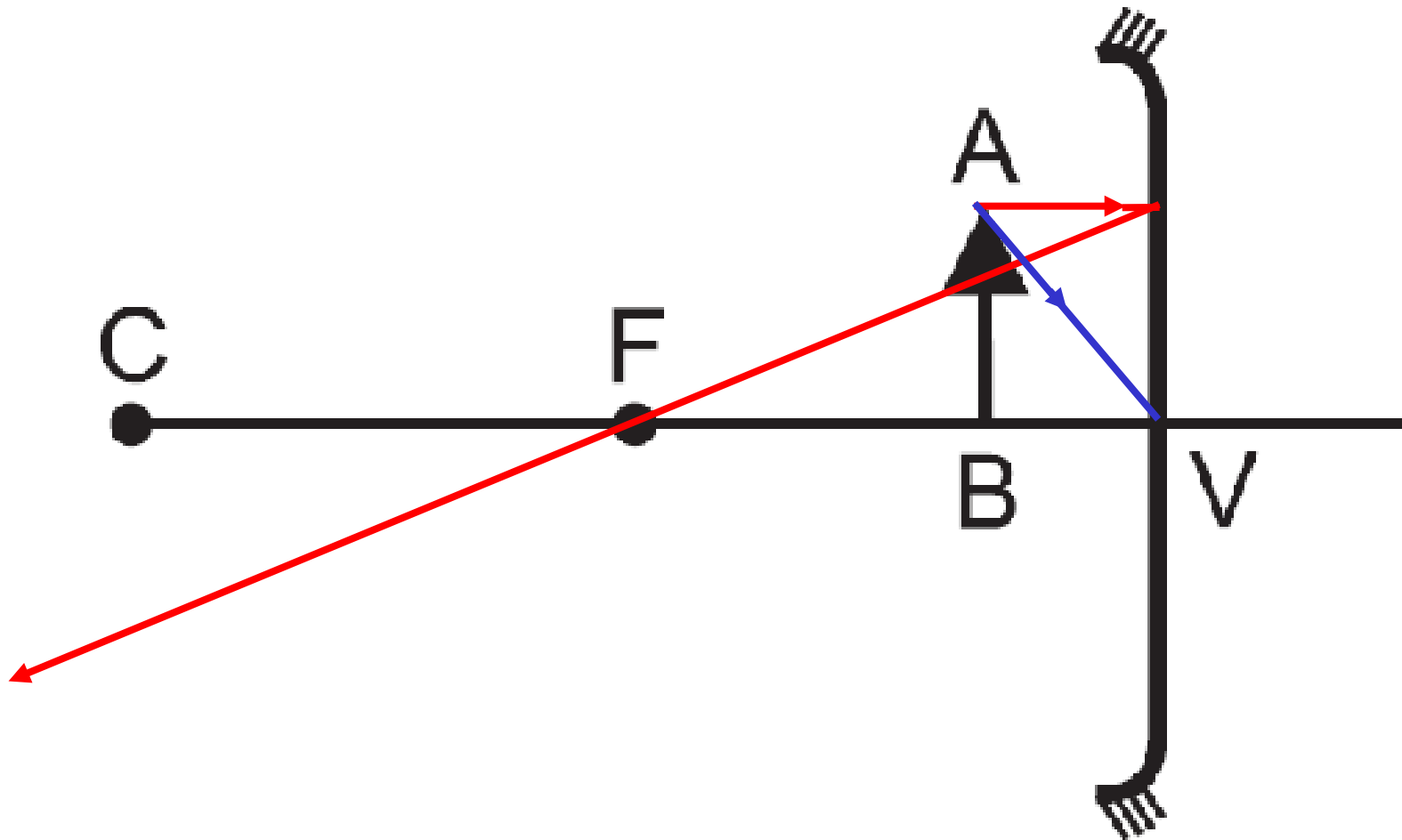


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

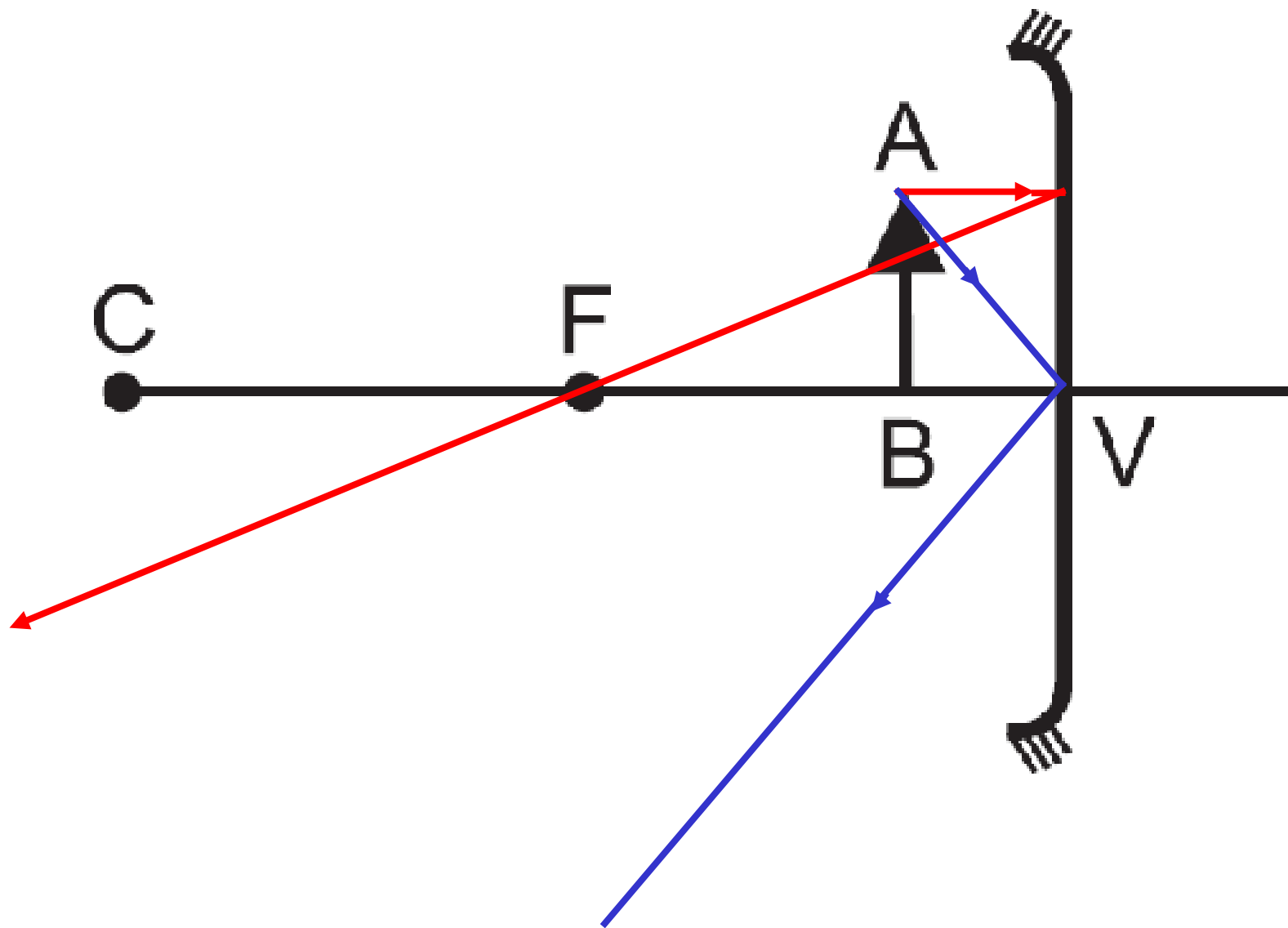


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

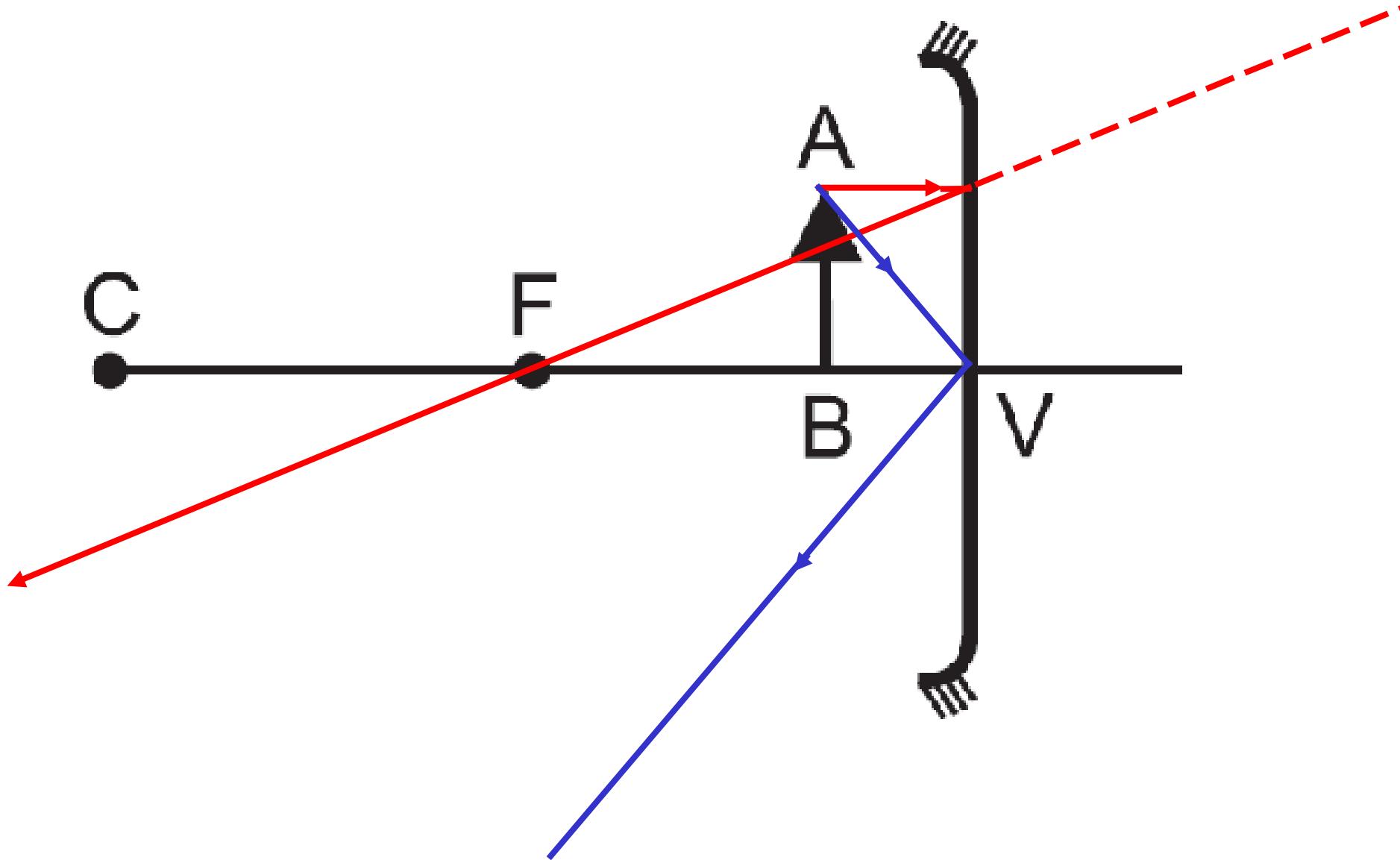


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V

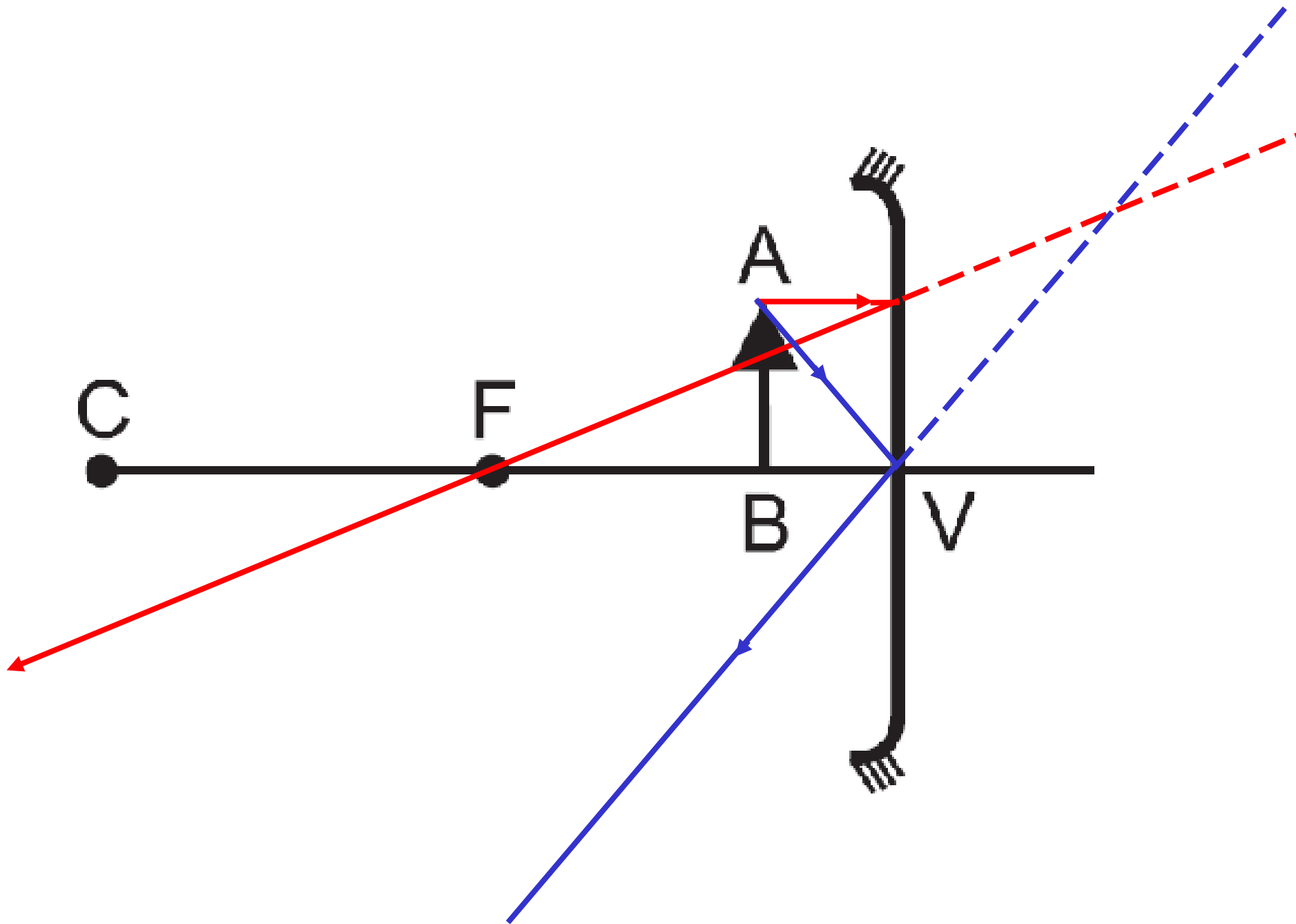
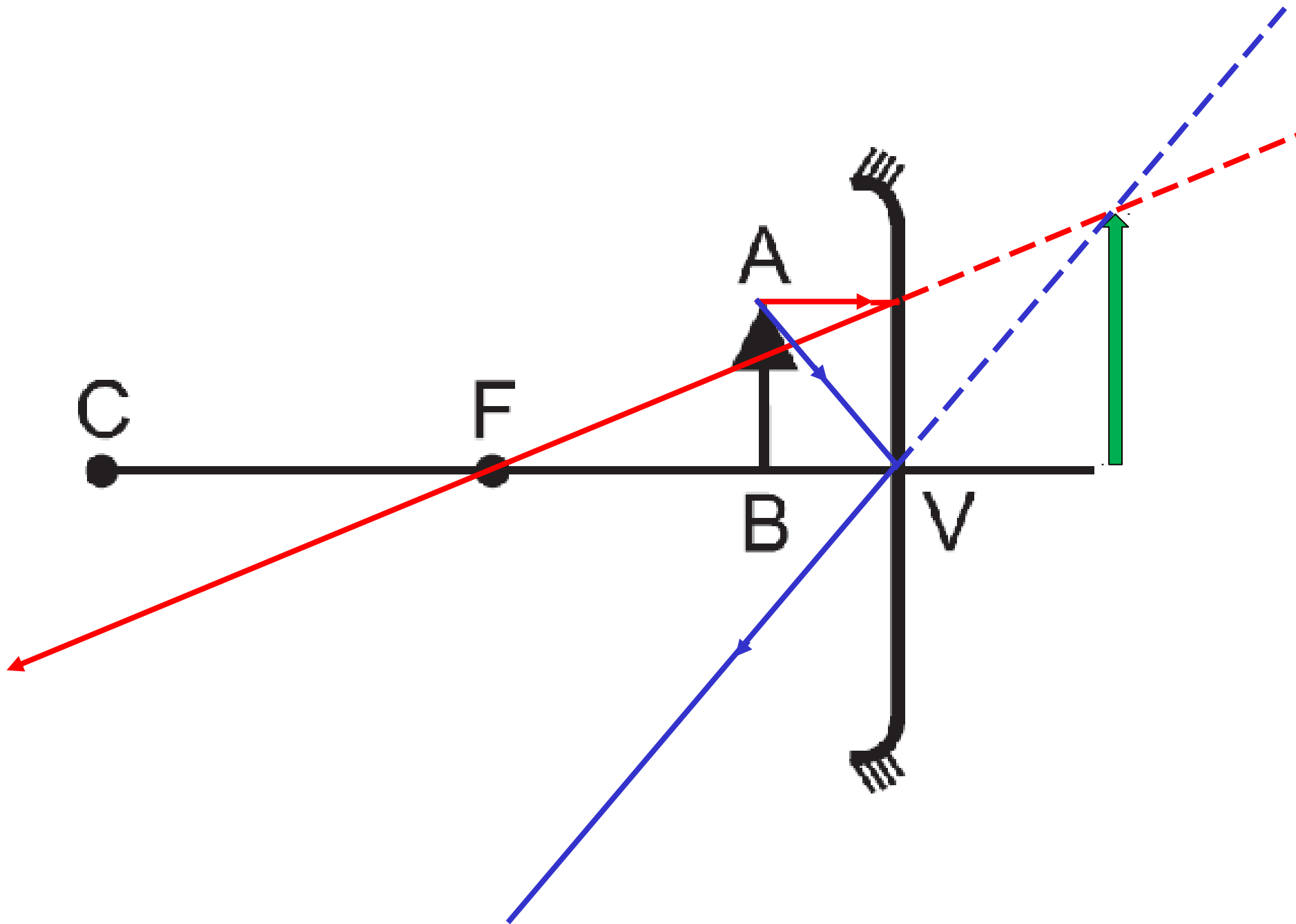


FIGURA 14: OBJETO ENTRE O FOCO F E O VÉRTICE V





FORMAÇÃO DE IMAGEM: CONSTRUÇÃO GEOMÉTRICA



Espelhos Convexo

FIGURA 15: ESPELHO CONVEXO – CASO GERAL

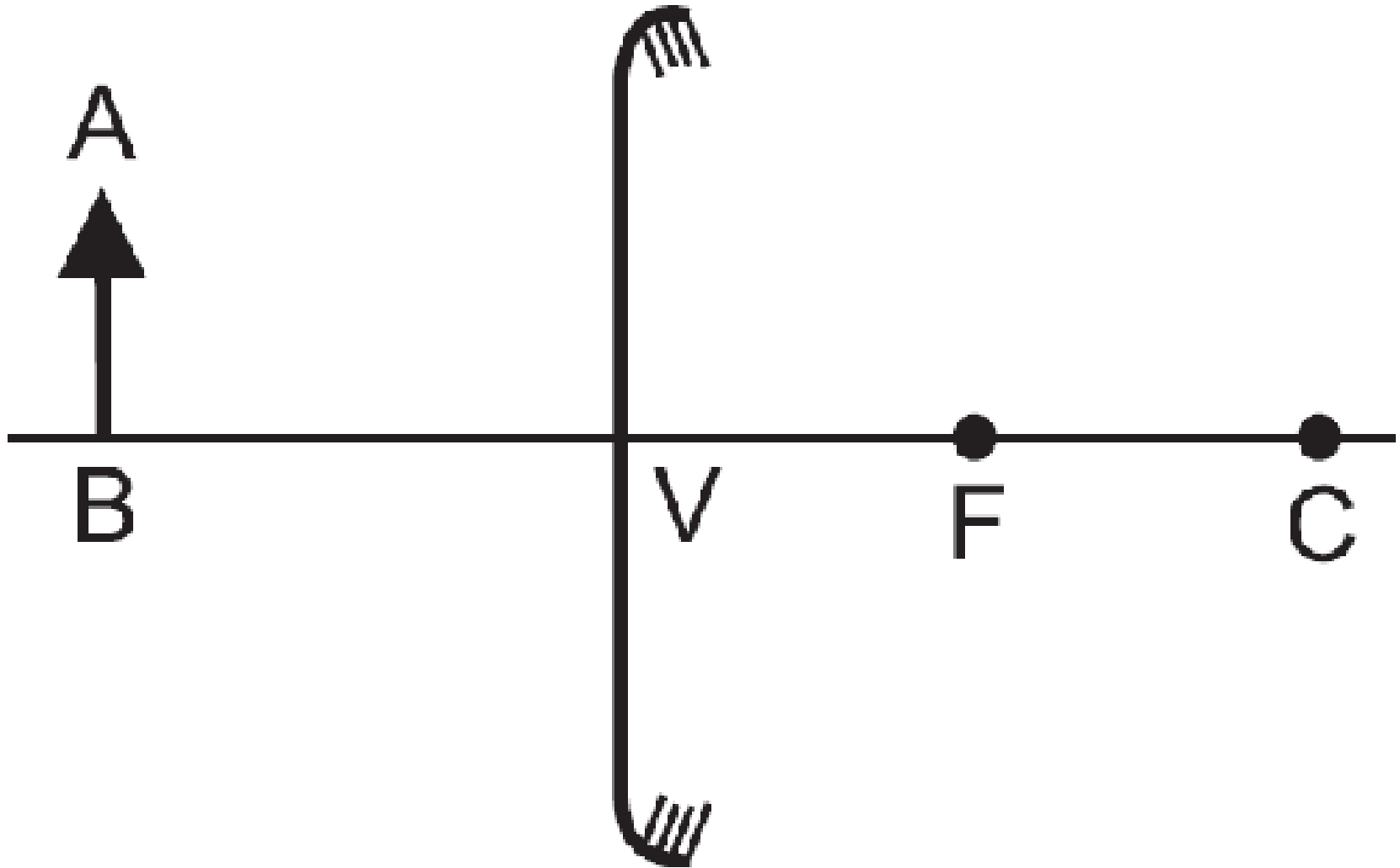


FIGURA 15: ESPELHO CONVEXO – CASO GERAL

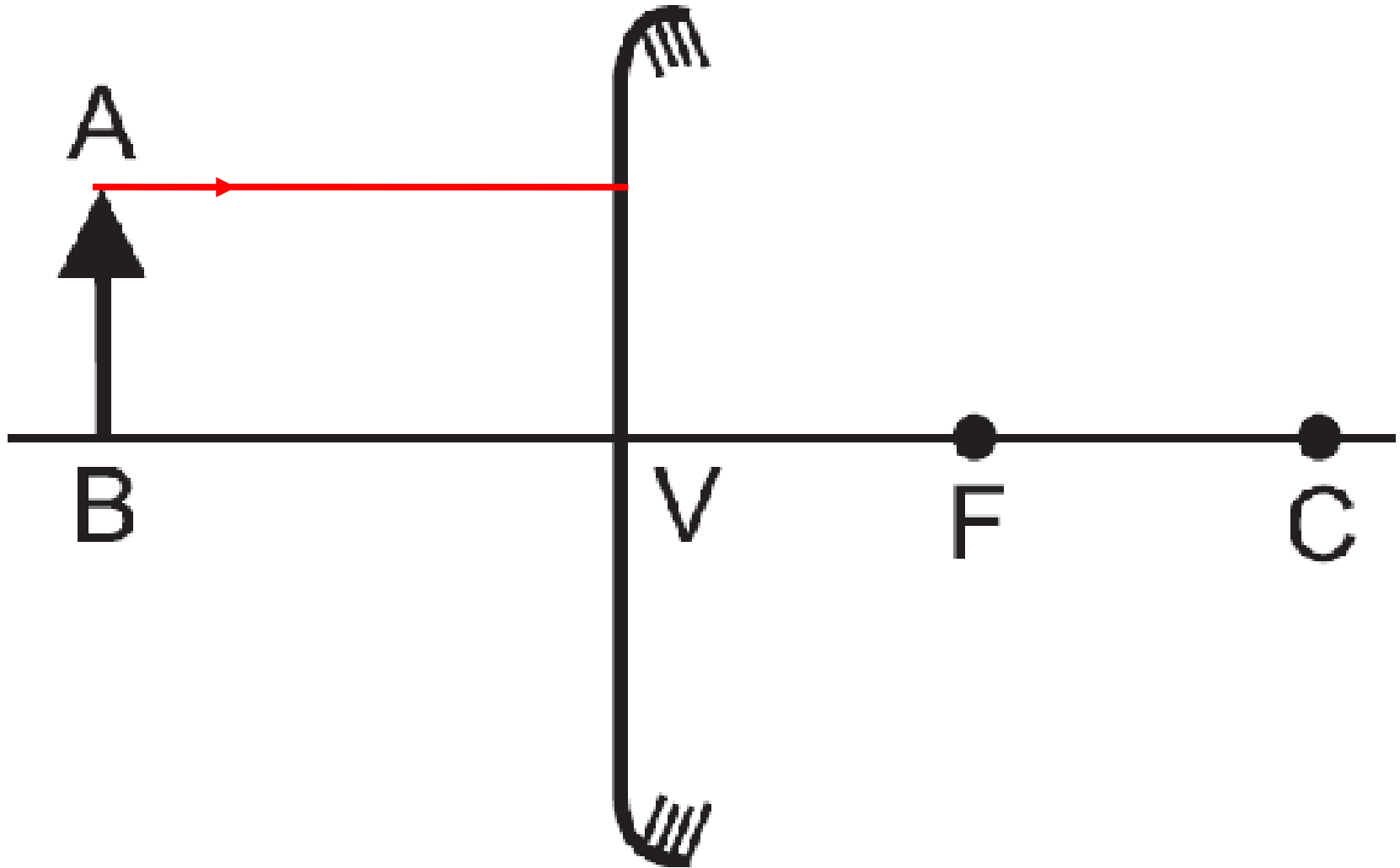


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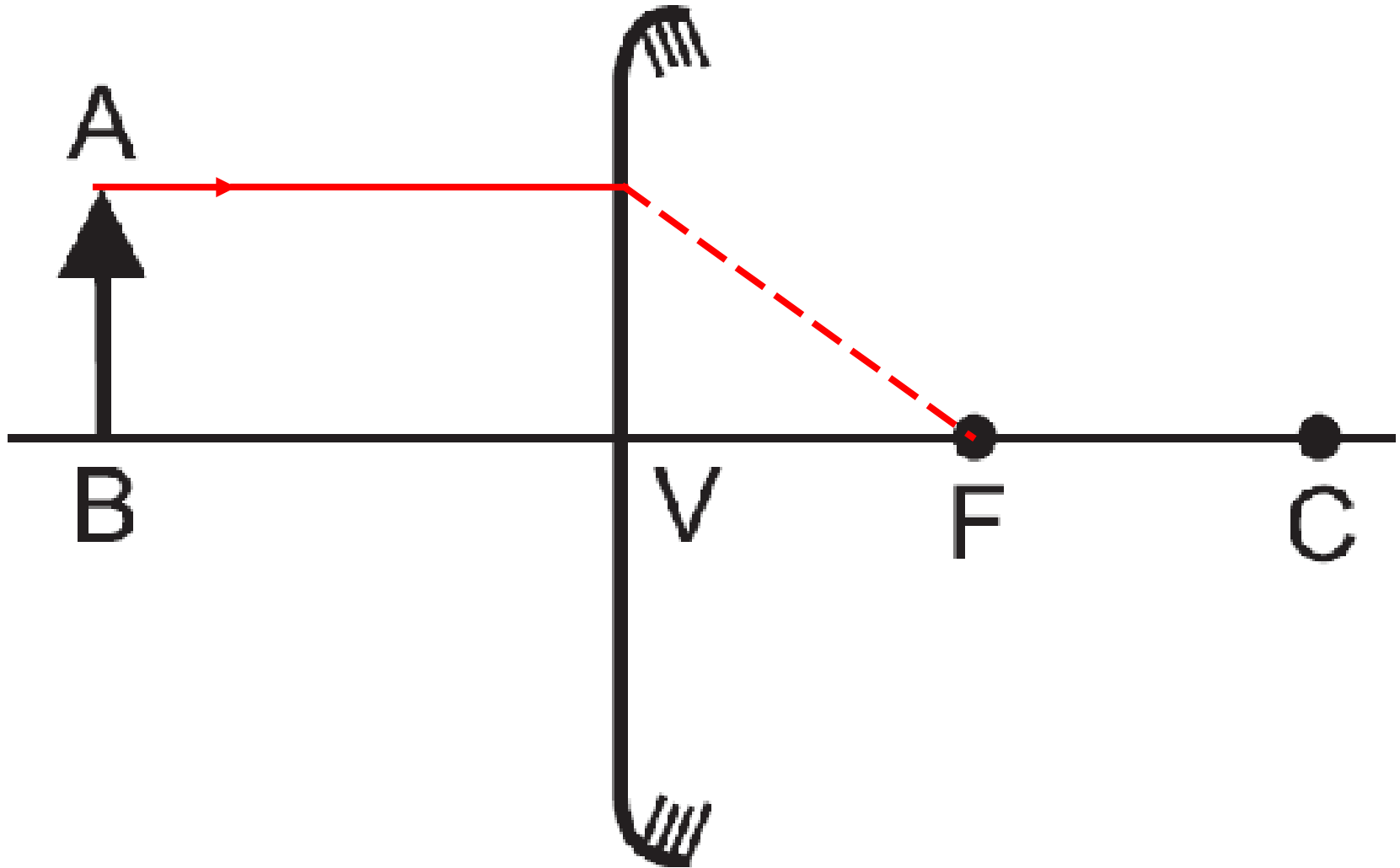


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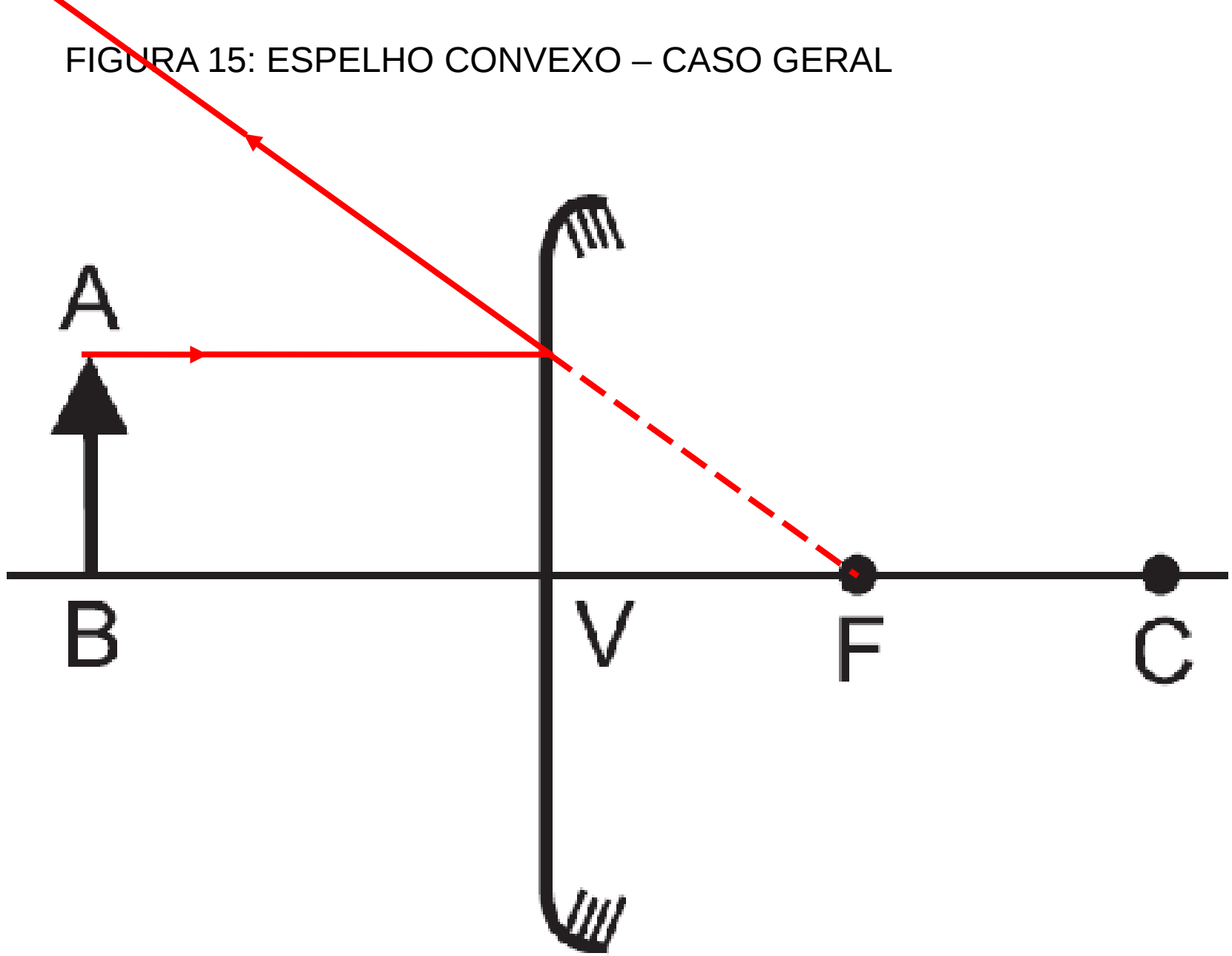


FIGURA 15: ESPELHO CONVEXO – CASO GERAL

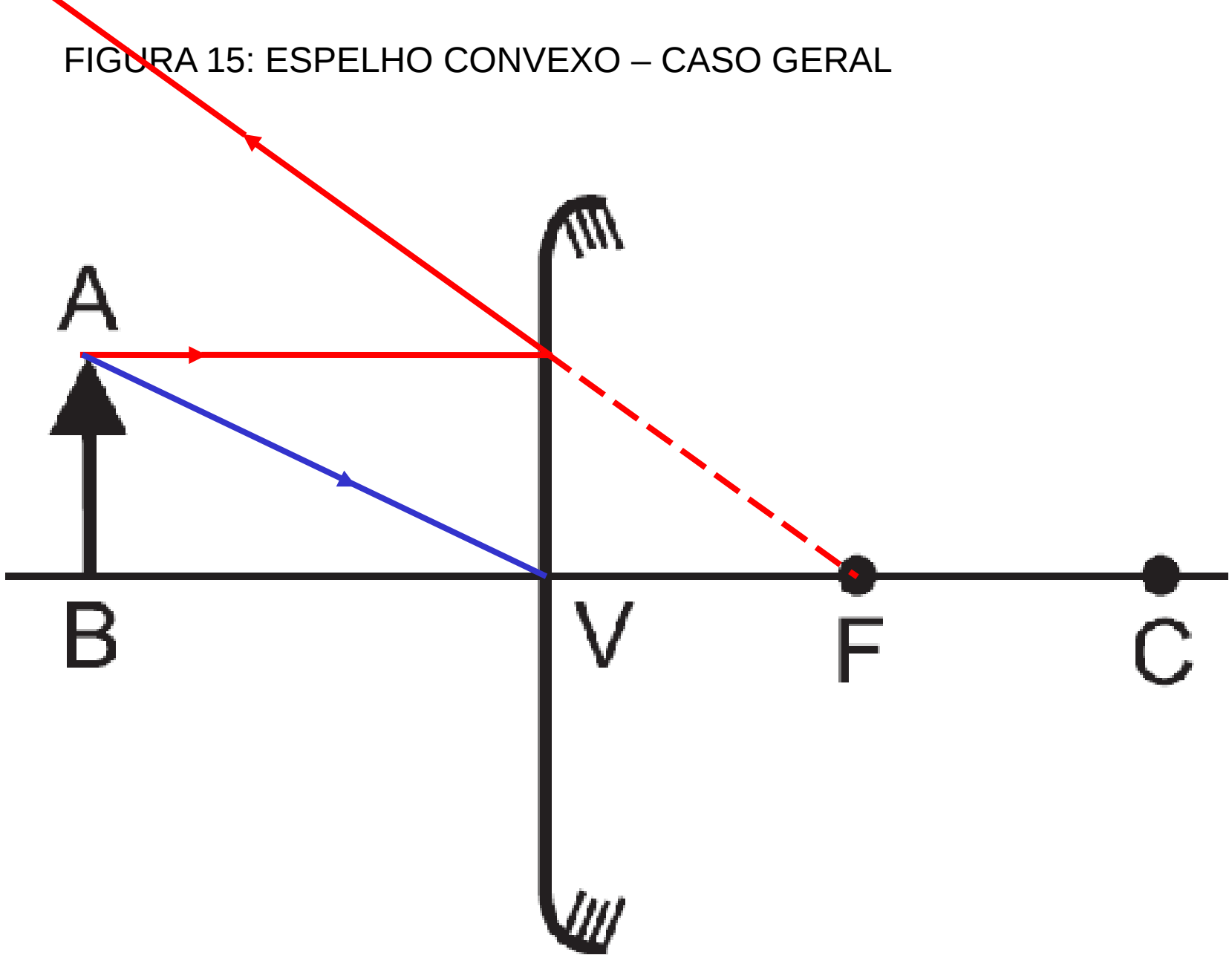


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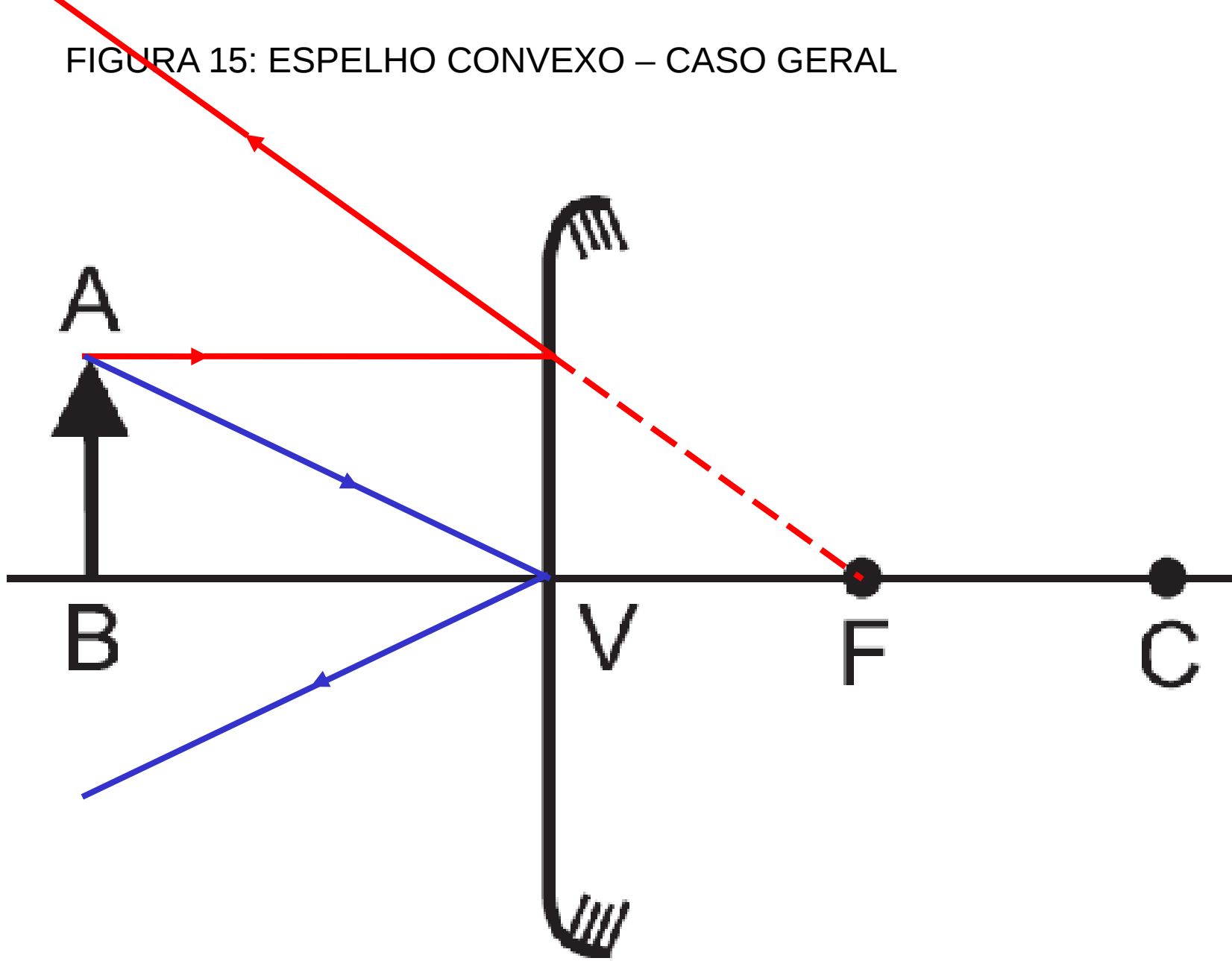


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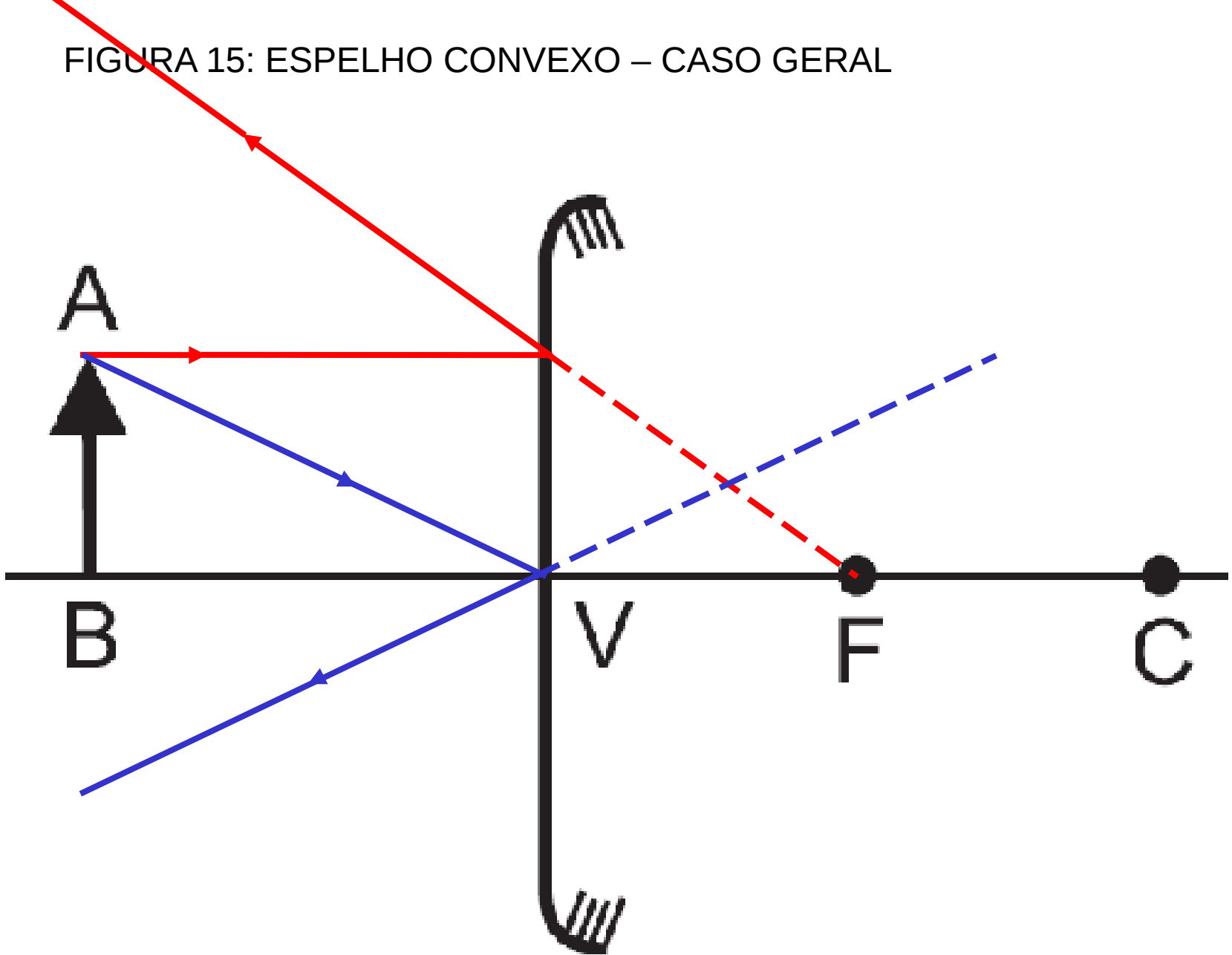


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