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COMBINATION OF POWER

DPP No. 10

1. A lens is formed by combining two thin lenses of power $+12\text{ D}$ and -8 D in contact with each other. What will be the focal length of combination?
 - A. 20 cm
 - B. 25 cm
 - C. -20 cm
 - D. -25 cm
2. An optician prescribes spectacles to a patient with a combination of a convex lens of focal length 40 cm and a concave lens of 25 cm focal length. What will be the power of spectacles?
 - A. $+1.5\text{ D}$
 - B. -1.5 D
 - C. -0.75 D
 - D. $+0.75\text{ D}$
3. A convex lens of power $+6\text{ D}$ is placed in contact with a concave lens of power -4 D . What will be the nature and focal length of this combination?
 - A. Concave, 25 cm
 - B. Convex, 50 cm
 - C. Concave, 20 cm
 - D. Convex, 100 cm
4. Two thin lenses of focal length 60 cm and -20 cm are placed in contact. The focal length of combination
 - A. $+30\text{ cm}$
 - B. -30 cm
 - C. $+15\text{ cm}$
 - D. -15 cm
5. The power of convex lens of focal length of 50 cm
 - A. -2 D
 - B. $+2\text{ D}$
 - C. -50 D
 - D. $+50\text{ D}$
6. Two converging lenses of equal focal lengths f are placed in contact. The focal length of the combination is
 - A. f
 - B. $f/2$
 - C. $2f$
 - D. $3f$
7. A convex lens of power $+6\text{ D}$ is placed in contact with a concave lens of power -4 D . The combination will act as a convex lens of focal length
 - A. 2 cm
 - B. 50 cm
 - C. 20 cm
 - D. 100 cm
8. The power of combination of two lenses separated by distance d
 - A. Increases as their separation is increased
 - B. Decrease as their separation is Decrease
 - C. Remains same
 - D. Becomes equal to the distance d
9. A convex lens has a focal length of 20 cm . Its power in dioptre is
 - A. -5 D
 - B. $+5\text{ D}$
 - C. -10 D
 - D. $+10\text{ D}$
10. Two lenses of power $+2\text{ D}$ and -2 D are placed in contact, the power of combination is
 - A. -2 D
 - B. $+2\text{ D}$
 - C. $+4\text{ D}$
 - D. None of the above