1. If x varies inversely as y, and x is 20 when y is 6, which value is x when y is 12?

   [A] $x = 120$ [B] $x = 4$ [C] $x = 10$ [D] $x = 1440$

2. If x varies inversely as y, and x is –54 when y is 70, which value is x when y is 63?

   [A] $x = -238{,}140$ [B] $x = -82$ [C] $x = -60$ [D] $x = -3780$

3. If x varies inversely as y, and x is 6 when y is 48, which value is x when y is 16?

   [A] $x = 18$ [B] $x = 288$ [C] $x = 128$ [D] $x = 4608$

4. If x varies inversely as y, and x is 63 when y is 20, which value is x when y is 28?

   [A] $x = 45$ [B] $x = 35{,}280$ [C] $x = 1260$ [D] $x = 9$

5. If x varies inversely as y, and x is 90 when y is 80, which value is x when y is 100?

   [A] $x = 7200$ [B] $x = 72$ [C] $x = 720{,}000$ [D] $x = 89$

6. If x varies inversely as y, and x is –24 when y is 6, which value is x when y is 12?

   [A] $x = -144$ [B] $x = -3$ [C] $x = -1728$ [D] $x = -12$

7. If x varies inversely as y, and x is –70 when y is 40, which value is x when y is 80?

   [A] $x = -35$ [B] $x = -2800$ [C] $x = -224{,}000$ [D] $x = -46$

8. If x varies inversely as y, and x is –32 when y is 14, which value is x when y is 16?

   [A] $x = -7168$ [B] $x = -448$ [C] $x = -7$ [D] $x = -28$

9. If x varies inversely as y, and x is 18 when y is 45, which value is x when y is 15?

   [A] $x = 810$ [B] $x = 54$ [C] $x = 38$ [D] $x = 12{,}150$

10. If x varies inversely as y, and x is –6 when y is 35, which value is x when y is 15?

    [A] $x = -210$ [B] $x = -88$ [C] $x = -3150$ [D] $x = -14$

11. Which of the following equations shows an inverse variation if $y = 4$ when $x = 8$?

    [A] $\frac{8}{4} = \frac{x}{y}$ [B] $\frac{y}{4} = \frac{x}{8}$ [C] $\frac{y}{4} = \frac{8}{x}$ [D] $\frac{y}{8} = \frac{x}{4}$

12. Which of the following equations shows an inverse variation if $y = 5$ when $x = 2$?

[A] $\frac{y}{5} = \frac{x}{2}$ [B] $\frac{2}{5} = \frac{x}{y}$ [C] $\frac{y}{2} = \frac{x}{5}$ [D] $xy = 10$

13. Which of the following equations shows an inverse variation if $y = 3$ when $x = 5$?

[A] $\frac{y}{5} = \frac{x}{3}$ [B] $\frac{y}{3} = \frac{x}{5}$ [C] $\frac{5}{3} = \frac{x}{y}$ [D] $y = \frac{15}{x}$

14. Which of the following equations shows an inverse variation if $y = 8$ when $x = 6$?

[A] $\frac{y}{6} = \frac{x}{8}$ [B] $\frac{y}{8} = \frac{x}{6}$ [C] $xy = 48$ [D] $\frac{6}{8} = \frac{x}{y}$

15. Which of the following equations shows an inverse variation if $y = 7$ when $x = 9$?

[A] $\frac{y}{7} = \frac{x}{9}$ [B] $y = \frac{63}{x}$ [C] $\frac{y}{9} = \frac{x}{7}$ [D] $\frac{9}{7} = \frac{x}{y}$

16. Which of the following equations shows an inverse variation if $y = 6$ when $x = 3$?

[A] $\frac{y}{3} = \frac{x}{6}$ [B] $\frac{3}{6} = \frac{x}{y}$ [C] $\frac{y}{6} = \frac{3}{x}$ [D] $\frac{y}{6} = \frac{x}{3}$

17. Which of the following equations shows an inverse variation if $y = 2$ when $x = 7$?

[A] $\frac{y}{7} = \frac{x}{2}$ [B] $\frac{7}{2} = \frac{x}{y}$ [C] $xy = 14$ [D] $\frac{y}{2} = \frac{x}{7}$

18. Which of the following equations shows an inverse variation if $y = 9$ when $x = 4$?

[A] $\frac{y}{9} = \frac{x}{4}$ [B] $y = \frac{36}{x}$ [C] $\frac{4}{9} = \frac{x}{y}$ [D] $\frac{y}{4} = \frac{x}{9}$

19. Which of the following equations shows an inverse variation if $y = 4$ when $x = 6$?

[A] $\frac{y}{6} = \frac{x}{4}$ [B] $\frac{6}{4} = \frac{x}{y}$ [C] $\frac{y}{4} = \frac{x}{6}$ [D] $\frac{y}{4} = \frac{6}{x}$

20. Which of the following equations shows an inverse variation if $y = 5$ when $x = 4$?

[A] $\frac{4}{5} = \frac{x}{y}$ [B] $\frac{y}{5} = \frac{x}{4}$ [C] $\frac{y}{5} = \frac{4}{x}$ [D] $\frac{y}{4} = \frac{x}{5}$