Ch. 7 Getting Ready for the Test p. 512

1. $\frac{-x}{4-x} = \frac{-x}{-x+4} = \frac{-1x}{-1(x-4)} = \frac{x}{x-4}$ (D)

2. $\frac{x+3}{x^2+9}$ $x^2+9 \neq 0$ $\sqrt{x^2} \neq \sqrt{-9}$ $x \neq \pm 3i$ non-real solutions (E)

3. $\frac{y-6}{6-y} = \frac{y-6}{-y+6} = \frac{y-6}{-1(y-6)} = \frac{1}{-1} = -1$ (B)

4. $\frac{y+3}{3+y} = \frac{y+3}{y+3} = \frac{1}{1} = 1$ (A)

5. $\frac{x-2}{-2+x} = \frac{x-2}{x-2} = \frac{1}{1} = 1$ (A)

6. $\frac{m-4}{m+4} = \frac{m-4}{m+4}$ (C)

7. $\frac{8}{x^2} \cdot \frac{4}{x^2} = \frac{32}{x^4}$ (C)

8. $\frac{8}{x^2} \cdot \frac{x^2}{4} = \frac{8x^2}{4x^2} = \frac{8}{4}$ 2 (D)

9. $\frac{8}{x^2} + \frac{4}{x^2} = \frac{12}{x^2}$ (D)

10. $\frac{7x}{x-1} - \frac{5+2x}{x-1} = \frac{7x-5-2x}{x-1} = \frac{5x-5}{x-1} = \frac{5(x-1)}{x-1} = \boxed{5}$ (A)

11. $\frac{9}{25x}$; $\frac{7}{10x^3}$ LCD: $50xxx = \boxed{50x^3}$ (D)

$5 \cdot 5 \cdot x$ $2 \cdot 5 \cdot xxx$

12. $\frac{5}{4x+8}$; $\frac{9}{8x-8}$ LCD: $8(x-1)(x+2)$ (D)

$4(x+2)$ $8(x-1)$

13. $\frac{5}{x} + \frac{1}{3}$

expression, (A)

14. $\frac{5}{x} + \frac{1}{3} = \frac{2}{x}$

equation, (B)

15. $\frac{a+5}{11} = 9$

equation, (B)

16. $\frac{a+5}{11} \cdot 9$

expression, (A)

17. $\frac{x+3}{4}^{(3)} + \frac{5}{6}^{(2)} = 3^{(12)}$ LCD: ~~10~~ 12

$3(x+3) + 5(2) = 3(12)$ (C)

$3x + 9 + 10 = 36$

$3x + 19 = 36$

$3x = 17$

$x = \frac{17}{3}$

18. $3 - \frac{10x}{4(x+1)} = \frac{5}{6(x+1)}$ LCD: $12(x+1)$

$3(12(x+1)) - 10x(3) = 5(2)$ (C)

19. $\frac{x}{5} = x + 12$ (A)

20. $\frac{\frac{2}{x}}{\frac{1}{y^2} + \frac{1}{5x}} = \frac{\frac{2}{x}}{\frac{5x + y^2}{5xy^2}} = \frac{2}{x} \cdot \frac{5xy^2}{5x+y^2} = \frac{10y^2}{5x+y^2}$

LCD: $5xy^2$

(A)