

NAME: _____

P.I. A.A.16: Simplify fractions with polynomials in the numerator and denominator by factoring both and renaming them to lowest terms

Simplify:

1. $\frac{x^2 - 6x - 16}{x^2 - 4}$

[A] $\frac{x-8}{x-2}$

[B] $\frac{6x+16}{4}$

[C] $\frac{x+8}{x+2}$

[D] $\frac{x+2}{x+8}$

2. $\frac{x^2 - 3x - 28}{x^2 - 49}$

[A] $\frac{x+7}{x+4}$

[B] $\frac{3x+28}{49}$

[C] $\frac{x+4}{x+7}$

[D] $\frac{x-7}{x-4}$

3. $\frac{x^2 + 4x - 12}{x^2 - 36}$

[A] $\frac{x+2}{x+6}$

[B] $\frac{x-2}{x-6}$

[C] $\frac{-4x+12}{36}$

[D] $\frac{x+6}{x+2}$

4. $\frac{x^2 + 2x - 48}{x^2 - 36}$

[A] $\frac{x+6}{x+8}$

[B] $\frac{-2x+48}{36}$

[C] $\frac{x+8}{x+6}$

[D] $\frac{x-6}{x-8}$

5. $\frac{x^2 + x - 20}{x^2 - 16}$

[A] $\frac{x+4}{x+5}$

[B] $\frac{x+5}{x+4}$

[C] $\frac{x-4}{x-5}$

[D] $\frac{-x+20}{16}$

6. $\frac{x^2 - 3x - 70}{x^2 - 49}$

[A] $\frac{x-10}{x-7}$

[B] $\frac{3x+70}{49}$

[C] $\frac{x+10}{x+7}$

[D] $\frac{x+7}{x+10}$

7. $\frac{x^2 - 2x - 15}{x^2 - 9}$

[A] $\frac{2x+15}{9}$

[B] $\frac{x+5}{x+3}$

[C] $\frac{x+3}{x+5}$

[D] $\frac{x-5}{x-3}$

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Simplify:

8. $\frac{x^2 - x - 6}{x^2 - 9}$

[A] $\frac{x - 3}{x - 2}$

[B] $\frac{x + 3}{x + 2}$

[C] $\frac{x + 6}{9}$

[D] $\frac{x + 2}{x + 3}$

9. $\frac{x^2 + 5x - 14}{x^2 - 49}$

[A] $\frac{x - 2}{x - 7}$

[B] $\frac{x + 2}{x + 7}$

[C] $\frac{x + 7}{x + 2}$

[D] $\frac{-5x + 14}{49}$

10. $\frac{x^2 - 4x - 32}{x^2 - 64}$

[A] $\frac{x - 8}{x - 4}$

[B] $\frac{x + 4}{x + 8}$

[C] $\frac{x + 8}{x + 4}$

[D] $\frac{4x + 32}{64}$

11. $\frac{x^2 + x - 6}{x^2 - 9}$

12. $\frac{x^2 - x - 42}{x^2 - 49}$

13. $\frac{x^2 + 3x - 40}{x^2 - 64}$

14. $\frac{x^2 - 5x - 36}{x^2 - 81}$

15. $\frac{x^2 + x - 6}{x^2 - 4}$

16. $\frac{x^2 + x - 20}{x^2 - 25}$

17. $\frac{x^2 - x - 6}{x^2 - 9}$

18. $\frac{x^2 + x - 72}{x^2 - 81}$

19. $\frac{x^2 + 6x - 16}{x^2 - 64}$

20. $\frac{x^2 - x - 12}{x^2 - 16}$

[1] A

[2] C

[3] B

[4] C

[5] B

[6] A

[7] D

[8] D

[9] A

[10] B

[11] $\frac{x-2}{x-3}$ _____

[12] $\frac{x+6}{x+7}$ _____

[13] $\frac{x-5}{x-8}$ _____

[14] $\frac{x+4}{x+9}$ _____

[15] $\frac{x+3}{x+2}$ _____

[16] $\frac{x-4}{x-5}$ _____

[17] $\frac{x+2}{x+3}$ _____

[18] $\frac{x-8}{x-9}$ _____

[19] $\frac{x-2}{x-8}$ _____

[20] $\frac{x+3}{x+4}$ _____