

NAME: _____

P.I. A.A.18: Divide algebraic fractions and express the quotient in simplest form

P.I. A2.A.16: Perform arithmetic operations with rational expressions and rename to lowest terms

Divide:

1. $\frac{x^2 + 11x + 28}{x^2 - 16} \div \frac{x + 7}{x - 7}$

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

[B] $\frac{x - 9}{x - 4}$

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

[D] $\frac{11x + 7}{4}$

2. $\frac{x^2 + 9x + 20}{x^2 - 25} \div \frac{x + 4}{x - 4}$

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

[B] $\frac{9x + 4}{5}$

[C] $\frac{x - 9}{x - 5}$

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

3. $\frac{x^2 - 1}{x + 5} \div (x + 1)$

[A] $\frac{x - 1}{x + 5}$

[B] $\frac{x + 5}{x - 1}$

[C] $\frac{(x + 1)(x - 1)}{x + 5}$

[D] $\frac{x + 1}{x + 5}$

4. $\frac{x^2 - 64}{x - 4} \div (x + 8)$

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

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

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

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

5. $\frac{x + 1}{x - 1} \div \frac{x^2 - 1}{1 - x}$

[A] $\frac{x + 1}{x - 1}$

[B] $\frac{1}{x - 1}$

[C] $\frac{1}{1 - x}$

[D] $\frac{1}{3 - x}$

6. What is the quotient $\frac{y - 5}{20} \div \frac{5 - y}{25}$?

[A] -0.002

[B] -0.8

[C] 1.25

[D] -1.25

[E] 0.8

Divide:

7. $\frac{x^2 - 81}{x + 3} \div (x - 9)$

8. $\frac{x + 2}{x - 2} \div \frac{x^2 - 4}{2 - x}$

9. $\frac{x + 5}{x - 5} \div \frac{x^2 - 25}{5 - x}$

10. Find two rational expressions that can be divided to give the quotient $\frac{x - 3}{x + 1}$.

[1] A

[2] D

[3] A

[4] D

[5] C

[6] D

[7] $\frac{x+9}{x+3}$ _____

[8] $\frac{1}{2-x}$ _____

[9] $\frac{1}{5-x}$ _____

Answers may vary. Sample:

[10] $\frac{x^2+x-12}{x^2+2x+1} \div \frac{x+4}{x+1}$ _____