Integrated Algebra Practice: A.A.18 #2
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NAME:_____

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

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 $\frac{x-3}{x+1}$.

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