

Algebra 3 Assignment # 1

Solve for x in the following equations:

$$(1) \frac{2}{x+6} - \frac{2}{x-6} = 0$$

$$(2) \frac{x+1}{x+10} = \frac{1}{2x}$$

$$(3) \frac{5}{x^2-9} = \frac{3}{x+3} - \frac{2}{x-3}$$

$$(4) \frac{1}{x^2+4} + \frac{1}{x^2-4} = \frac{18}{x^4-16}$$

Find the x-intersects

$$(5) f(x) = \frac{3}{2x^2-3x-2} - \frac{x+2}{2x+1} - \frac{2x}{10-5x}$$

$$(6) f(x) = \frac{10-5x}{3x} - \frac{2}{x+5} - \frac{8-4x}{x+5}$$

Solve for the variable indicated

$$(7) S = \pi(r_1 + r_2)s \quad \text{solve for } r_1 \quad (8) \frac{1}{f} = \frac{1}{m} + \frac{1}{p} \quad \text{solve for } m \quad (9) S = \frac{n}{2}[2a + (n-1)d] \quad \text{solve for } d$$

Solve the system of equations:

$$(10) \begin{cases} 2x+3y=7 \\ y=\frac{1}{x} \end{cases}$$

Answers:

1. NS

2. x= 2, -5/2

3. x=20

4. x= 3, -3

5. x= -5, 7

6. x= 10/7, 5

$$7. r_1 = \frac{s - r_2 s \pi}{s \pi}$$

$$8. m = \frac{fp}{p-f}$$

$$9. d = \frac{2s-2an}{n(n-1)}$$

10. x= 1/2, 3