What Value of x Makes the Fraction Undefined?

1) $\dfrac{4x}{2x-4}$

2) $\dfrac{x-3}{3x+1}$

3) $\dfrac{5-x}{x-5}$

4) $\dfrac{x}{5x+15}$

What Value of x Makes the Fraction Undefined? (A)

1) $x = 2$

2) $x = -\frac{1}{3}$

3) $x = 5$

4) $x = -3$

Simplify Each Fraction

1) $\dfrac{x+5}{x^2+8x+15}$

2) $\dfrac{2x^2+6x}{x^2-3x-18}$

3) $\dfrac{x^2+13x+12}{x^2-144}$

4) $\dfrac{4x-12}{x^2+4x-21}$

Simplify Each Fraction (A)

1) $\dfrac{1}{x+3}$

2) $\dfrac{2x}{x-6}$

3) $\dfrac{x+1}{x-12}$

4) $\dfrac{4}{x+7}$

Find the Product

1) $\dfrac{x^2-4}{x^2+7x+10} \bullet \dfrac{2x+4}{x-2}$

2) $\dfrac{3x^2-12x}{5} \bullet \dfrac{x-2}{x^2-6x+8}$

3) $\dfrac{8x^5}{6y^4} \bullet \dfrac{4y^3}{2x}$

4) $\dfrac{x^2-25}{x-2} \bullet \dfrac{x^2-4}{x+5}$

Find the Product (A)

1) $\dfrac{2(x+2)}{x+5}$

2) $\dfrac{3x}{5}$

3) $\dfrac{8x^4}{3y}$

4) $(x-5)(x+2)$

Find the Quotient

Remember to Change to Multiplication and Flip the Second Fraction

1) $\dfrac{2x^3}{3x} \div \dfrac{3}{4x^2}$

2) $\dfrac{4x^2}{5y^7} \div \dfrac{9x^4}{5y^3}$

3) $\dfrac{x^2-5x+4}{2x} \div \dfrac{2x-2}{8x^2}$

4) $\dfrac{15}{21x^3} \div \dfrac{5}{7x^5}$

Find the Quotient (A)

Remember to Change to Multiplication and Flip the Second Fraction

1) $\dfrac{8x^4}{9}$

2) $\dfrac{4}{9x^2y^4}$

3) $2x(x-4)$

4) x^2

Find the Sum/Difference

1) $\dfrac{x+4}{4}+\dfrac{3x-2}{4}$

2) $\dfrac{3x+5}{x+2}+\dfrac{x+3}{x+2}$

3) $\dfrac{3x+4}{x-3}-\dfrac{2x+1}{x-3}$

4) $\dfrac{5}{6x^2}-\dfrac{7}{6x^2}$

Find the Sum/Difference (A)

1) $\dfrac{2x+1}{2}$

2) 4

3) $\dfrac{x+3}{x-3}$

4) $-\dfrac{1}{3x^2}$

Find the Sum/Difference

Remember to find Common Denominators

1) $\dfrac{x-1}{3} - \dfrac{x+2}{27}$

2) $\dfrac{5x}{6} - \dfrac{2x}{3}$

3) $\dfrac{7x-9}{4x} + \dfrac{3-5x}{2x}$

4) $\dfrac{5}{6x} - \dfrac{3}{18x}$

Find the Sum/Difference (A)

Remember to find Common Denominators

1) $\dfrac{8x-11}{27}$

2) $\dfrac{x}{6}$

3) $\dfrac{-3x-3}{4x}$

4) $\dfrac{2}{3x}$

Solve for x

Remember to find Common Denominators (If Necessary)

1) $\frac{2}{3x^2}+\frac{x-4}{3x^2}=\frac{3}{x^2}$

2) $\frac{x+3}{2}-\frac{1}{6}=\frac{1}{3}$

3) $\frac{4}{15}+\frac{x+1}{5}=\frac{2x}{3}$

4) $\frac{2}{5}=\frac{x-2}{x+7}$

Solve for x (A)

Remember to find Common Denominators (If Necessary)

1) $x = 11$

2) $x = -2$

3) $x = 1$

4) $x = 8$

Probability

1) The freshman class buffet consists of 4 different salads, 3 types of sandwiches, and 6 varieties of desserts. How many different selections consisting of one salad, one sandwich, and one dessert are possible?

2) How many different 5-letter arrangements can be made from the word FAIRY?

3) A biology class has 8 students. How many different lab groups may be formed that will consist of three students?

4) In how many ways can you give 1st, 2nd, and 3rd, prize in a pumpkin growing contest when 7 pumpkins are entered in the contest?

Probability (A)

1) $4 \bullet 3 \bullet 6 = 72$

2) $5 \bullet 4 \bullet 3 \bullet 2 \bullet 1 = 120$ or ${}_5P_5 = 120$

3) ${}_8C_3 = 56$

4) $7 \bullet 6 \bullet 5 = 210$ or ${}_7P_3 = 210$