

Math 95 Practice Test 5

1. Solve:

a.
$$\frac{2}{x-3} - \frac{4}{x+3} = \frac{8}{x^2-9}$$

b.
$$\frac{x-3}{x+1} - \frac{x-6}{x+5} = 0$$

2. Simplify:

a.
$$\frac{\frac{1}{x} + \frac{1}{y}}{\frac{1}{xy}}$$

b.
$$\frac{\frac{x - xy^{-1}}{x+1}}{y}$$

3. Find the equation of the line through $(-3, -2)$, perpendicular to $2x + 3y = 4$

4. Graph:

a.
$$g(x) = x^2 - 2$$

b.
$$h(x) = |x + 4|$$

5. The surface area of a ball varies directly with the square of its radius. A ball with a radius of 2 inches has a surface area of 16π square inches. Find the surface area of a ball with a 3 inch radius.

6. Find the measure of an angle if its measure is four times that of its supplement.

7. A 20 foot ladder is leaning on a house, with the base of the ladder 15 feet from the house. How far up the house does the ladder reach?

8. A rectangular field is 50 feet long and 40 feet wide. If fencing costs \$15 per yard, how much will it cost to enclose the field?

9. A contractor charges \$50 per square yard. What is the cost of plastering 60 feet of wall in a house with a 9 foot ceiling?
10. Find the area of a circle with circumference 6π feet.