Name_____ ID: 1

SM3-A HW #6-9 (Review Solving Rational Eq's)   Date_____ Period_____

Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{3}{m^2} - \dfrac{m+4}{2m^2} = \dfrac{1}{2m^2}$

2) $\dfrac{6}{n^2} = \dfrac{1}{2n^2} + \dfrac{n-2}{2n^2}$

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

4) $\dfrac{1}{4r} + \dfrac{r+1}{2r} = \dfrac{1}{2r}$

5) $\dfrac{n+4}{n} + \dfrac{1}{3} = \dfrac{n^2-1}{n}$

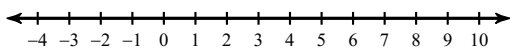6) $\dfrac{1}{6} - \dfrac{1}{3x} = \dfrac{x-2}{6x^2}$

Solve each compound inequality and write its solution as
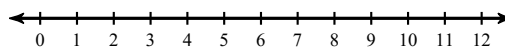**a) simplified inequality**
b) graph
c) Interval notation.

7) $6 + x < 5$ or $4x \geq 28$

8) $5x \leq 30$ and $8x > 16$

9) Solve:
$$(n+5)(n+7) \le 0$$

10) Solve:
$$-2(x+2)(x-5) > 0$$

Perform the indicated operation.

11) $g(x) = 3x + 2$
$h(x) = x^2 + 3$
Find $(-3g - h)(x)$

12) $g(a) = -a - 4$
$h(a) = a^2 - 5$
Find $(g \circ h)(8)$

Find the inverse of each function.

13) $f(n) = \dfrac{3}{n-2} + 1$

Solve each equation. Remember to check for extraneous solutions.

14) $-6 + \sqrt{1 - 8n} = 3$

Solve each equation by taking square roots.

15) $8a^2 - 6 = 442$

Solve each question. Round your answer to the nearest hundredth.

16) It takes Darryl 16 hours to harvest a field. Krystal can harvest the same field in 15 hours. How long would it take them if they worked together?

17) Kim can sweep a porch in 11 minutes. Gabriella can sweep the same porch in 12 minutes. How long would it take them if they worked together?