

## 8.6 worksheet

Solve each equation. Remember to check for extraneous solutions.

1)  $\frac{1}{2p} + \frac{1}{p} = \frac{p+6}{2p^2}$

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

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

4)  $\frac{1}{4n^2} = \frac{1}{2n^2} - \frac{n-2}{2n^2}$

5)  $\frac{4m-3}{6m^2} - \frac{m-6}{6m^2} = \frac{1}{6m}$

6)  $\frac{r-5}{r^2} = \frac{1}{4r} - \frac{1}{4r^2}$

7)  $\frac{v+6}{v^2+5v} = \frac{v+2}{4v^2+20v} + \frac{3}{v^2+5v}$

8)  $\frac{5}{b^2+5b} = \frac{6}{b} - \frac{1}{b^2+5b}$

$$9) \frac{6}{n^2 + 12n + 35} = \frac{1}{n^2 + 12n + 35} + \frac{1}{n + 7}$$

$$10) \frac{1}{x + 4} = 1 + \frac{5}{x + 4}$$

$$11) \frac{10k - 14}{k^2 + 3k} - \frac{7}{k + 3} = \frac{8}{k}$$

$$12) \frac{8}{x - 1} + \frac{1}{x - 1} = \frac{x - 8}{x^2 + 6x - 7}$$

$$13) \frac{1}{n^2 - 2n} + \frac{1}{n - 2} = \frac{5}{n^2 - 2n}$$

$$14) \frac{8a - 6}{a^2 + 4a} = \frac{1}{a + 4} + \frac{6}{a^2 + 4a}$$

- 15) The recommended percent  $p$  of oxygen (by volume) in the air that a diver breathes is given by  $p = \frac{660}{d + 33}$  where  $d$  is the depth (in feet) of the diver at what depth is air containing 5% oxygen recommended?

## Answers to 8.6 worksheet

1)  $\{3\}$

3)  $\left\{\frac{1}{2}\right\}$

5)  $\left\{-\frac{3}{2}\right\}$

7)  $\left\{-\frac{10}{3}\right\}$

9)  $\{0\}$

11)  $\left\{-\frac{38}{5}\right\}$

13)  $\{4\}$

15) 99 ft