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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{1}{b} + 1 = \dfrac{1}{5}$

2) $\dfrac{6}{5} + \dfrac{1}{5n} = \dfrac{n+6}{n}$

3) $\dfrac{1}{n^2} + \dfrac{n+3}{5n^2} = \dfrac{n-6}{n^2}$

4) $\dfrac{1}{r} + \dfrac{1}{r^2} = \dfrac{6}{r^2}$

5) $\dfrac{1}{x^2} = \dfrac{1}{3x^2} + \dfrac{1}{x}$

6) $\dfrac{2n+2}{3n^2} - \dfrac{1}{n^2} = \dfrac{5}{6n}$

7) $\dfrac{2}{3n} = \dfrac{5}{6n^2} + \dfrac{1}{6n}$

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

9) $\dfrac{2}{v} = \dfrac{v+4}{v^2} - \dfrac{5}{v^2}$

10) $\dfrac{1}{3} + \dfrac{1}{a} = \dfrac{a-6}{a}$

11) $\dfrac{k+5}{k^2} = \dfrac{k+2}{3k^2} + \dfrac{1}{k}$

12) $\dfrac{n-4}{n^2} - \dfrac{6n+5}{2n^2} = \dfrac{n-4}{2n^2}$

13) $\dfrac{1}{4k} - \dfrac{1}{2k^2} = \dfrac{5}{2k^2}$

14) $\dfrac{1}{3n} - 1 = \dfrac{1}{n}$

15) $\dfrac{2n+12}{n} = \dfrac{3}{2} - \dfrac{1}{n}$

16) $\dfrac{2}{3x^2} + \dfrac{5x-10}{3x^2} = \dfrac{1}{3x}$

17) $\dfrac{1}{6a^2} - \dfrac{1}{3a} = \dfrac{4}{a^2}$

18) $\dfrac{5v+15}{2v^2} = \dfrac{1}{v^2} - \dfrac{5v+25}{2v^2}$

19) $\dfrac{4}{3} + \dfrac{k+5}{k} = \dfrac{1}{3}$

20) $\dfrac{1}{6k} - \dfrac{1}{k} = \dfrac{k-1}{6k^2}$

21) $\dfrac{1}{n^2} - \dfrac{1}{n} = \dfrac{3}{n^2}$

22) $\dfrac{1}{5m^2} + \dfrac{1}{5m} = \dfrac{3}{5m^2}$

23) $\dfrac{1}{3x^2} + \dfrac{x+2}{x^2} = \dfrac{1}{3x}$

24) $\dfrac{1}{3n^2} + \dfrac{1}{3n} = \dfrac{1}{n^2}$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{1}{b} + 1 = \dfrac{1}{5}$ $\left\{-\dfrac{5}{4}\right\}$

2) $\dfrac{6}{5} + \dfrac{1}{5n} = \dfrac{n+6}{n}$

$\{29\}$

3) $\dfrac{1}{n^2} + \dfrac{n+3}{5n^2} = \dfrac{n-6}{n^2}$ $\left\{\dfrac{19}{2}\right\}$

4) $\dfrac{1}{r} + \dfrac{1}{r^2} = \dfrac{6}{r^2}$

$\{5\}$

5) $\dfrac{1}{x^2} = \dfrac{1}{3x^2} + \dfrac{1}{x}$ $\left\{\dfrac{2}{3}\right\}$

6) $\dfrac{2n+2}{3n^2} - \dfrac{1}{n^2} = \dfrac{5}{6n}$

$\{-2\}$

7) $\dfrac{2}{3n} = \dfrac{5}{6n^2} + \dfrac{1}{6n}$ $\left\{\dfrac{5}{3}\right\}$

8) $\dfrac{1}{n^2} = \dfrac{1}{2n^2} - \dfrac{n-1}{n^2}$ $\left\{\dfrac{1}{2}\right\}$

9) $\dfrac{2}{v} = \dfrac{v+4}{v^2} - \dfrac{5}{v^2}$

$\{-1\}$

10) $\dfrac{1}{3} + \dfrac{1}{a} = \dfrac{a-6}{a}$ $\left\{\dfrac{21}{2}\right\}$

11) $\dfrac{k+5}{k^2} = \dfrac{k+2}{3k^2} + \dfrac{1}{k}$

$\{13\}$

12) $\dfrac{n-4}{n^2} - \dfrac{6n+5}{2n^2} = \dfrac{n-4}{2n^2}$ $\left\{-\dfrac{9}{5}\right\}$

13) $\dfrac{1}{4k} - \dfrac{1}{2k^2} = \dfrac{5}{2k^2}$

$\{12\}$

14) $\dfrac{1}{3n} - 1 = \dfrac{1}{n}$ $\left\{-\dfrac{2}{3}\right\}$

15) $\dfrac{2n+12}{n} = \dfrac{3}{2} - \dfrac{1}{n}$

$\{-26\}$

16) $\dfrac{2}{3x^2} + \dfrac{5x-10}{3x^2} = \dfrac{1}{3x}$

$\{2\}$

17) $\dfrac{1}{6a^2} - \dfrac{1}{3a} = \dfrac{4}{a^2}$ $\left\{-\dfrac{23}{2}\right\}$

18) $\dfrac{5v+15}{2v^2} = \dfrac{1}{v^2} - \dfrac{5v+25}{2v^2}$ $\left\{-\dfrac{19}{5}\right\}$

19) $\dfrac{4}{3} + \dfrac{k+5}{k} = \dfrac{1}{3}$ $\left\{-\dfrac{5}{2}\right\}$

20) $\dfrac{1}{6k} - \dfrac{1}{k} = \dfrac{k-1}{6k^2}$ $\left\{\dfrac{1}{6}\right\}$

21) $\dfrac{1}{n^2} - \dfrac{1}{n} = \dfrac{3}{n^2}$

$\{-2\}$

22) $\dfrac{1}{5m^2} + \dfrac{1}{5m} = \dfrac{3}{5m^2}$

$\{2\}$

23) $\dfrac{1}{3x^2} + \dfrac{x+2}{x^2} = \dfrac{1}{3x}$ $\left\{-\dfrac{7}{2}\right\}$

24) $\dfrac{1}{3n^2} + \dfrac{1}{3n} = \dfrac{1}{n^2}$

$\{2\}$

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Solve each equation. Remember to check for extraneous solutions.

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

2) $\dfrac{2}{v} + \dfrac{1}{2} = 1$

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

4) $\dfrac{1}{r} + \dfrac{2r-12}{r} = \dfrac{r+3}{r}$

5) $\dfrac{4}{k^2} + \dfrac{5k-25}{k^2} = \dfrac{1}{k}$

6) $\dfrac{x-5}{2x^2} + \dfrac{1}{x^2} = \dfrac{1}{x}$

7) $\dfrac{p-4}{2p^2} - \dfrac{p+6}{p^2} = \dfrac{1}{p}$

8) $\dfrac{2n+6}{n^2} = \dfrac{3}{n} + \dfrac{n-3}{2n^2}$

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

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

11) $\dfrac{1}{2v} + \dfrac{4v-16}{3v} = 1$

12) $\dfrac{1}{5n} + \dfrac{1}{5n^2} = \dfrac{1}{n^2}$

13) $\dfrac{1}{v} + \dfrac{v+5}{v} = \dfrac{v+5}{5v}$

14) $\dfrac{2k-10}{3k^2} - \dfrac{4k+20}{3k^2} = \dfrac{1}{3k}$

15) $\dfrac{n-3}{6n^2} = \dfrac{1}{n^2} - \dfrac{n+4}{2n^2}$

16) $\dfrac{3}{a^2} = \dfrac{2a-10}{3a^2} - \dfrac{1}{3a^2}$

17) $\dfrac{1}{2} + \dfrac{n+1}{6n} = \dfrac{3n-6}{2n}$

18) $\dfrac{x-2}{2x^2} + \dfrac{1}{x^2} = \dfrac{2}{x^2}$

19) $1 + \dfrac{1}{2m} = \dfrac{1}{6m}$

20) $\dfrac{1}{6n^2} = \dfrac{1}{2n^2} + \dfrac{n+3}{3n^2}$

21) $\dfrac{1}{n^2} = \dfrac{1}{n} + \dfrac{1}{5n^2}$

22) $\dfrac{b+2}{6b} - \dfrac{b-2}{6b} = \dfrac{1}{6}$

23) $\dfrac{n-5}{4n} + \dfrac{1}{n} = \dfrac{5}{4n}$

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

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Solve each equation. Remember to check for extraneous solutions.

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

2) $\dfrac{2}{v} + \dfrac{1}{2} = 1$

$\{4\}$

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

$\{2\}$

4) $\dfrac{1}{r} + \dfrac{2r-12}{r} = \dfrac{r+3}{r}$

$\{14\}$

5) $\dfrac{4}{k^2} + \dfrac{5k-25}{k^2} = \dfrac{1}{k}$ $\left\{\dfrac{21}{4}\right\}$

6) $\dfrac{x-5}{2x^2} + \dfrac{1}{x^2} = \dfrac{1}{x}$

$\{-3\}$

7) $\dfrac{p-4}{2p^2} - \dfrac{p+6}{p^2} = \dfrac{1}{p}$ $\left\{-\dfrac{16}{3}\right\}$

8) $\dfrac{2n+6}{n^2} = \dfrac{3}{n} + \dfrac{n-3}{2n^2}$

$\{5\}$

9) $\dfrac{6}{x^2} - \dfrac{1}{2x} = \dfrac{x-2}{x^2}$ $\left\{\dfrac{16}{3}\right\}$

10) $\dfrac{1}{m^2} = \dfrac{1}{6m^2} - \dfrac{2}{3m}$ $\left\{-\dfrac{5}{4}\right\}$

11) $\dfrac{1}{2v} + \dfrac{4v-16}{3v} = 1$ $\left\{\dfrac{29}{2}\right\}$

12) $\dfrac{1}{5n} + \dfrac{1}{5n^2} = \dfrac{1}{n^2}$

$\{4\}$

13) $\dfrac{1}{v} + \dfrac{v+5}{v} = \dfrac{v+5}{5v}$ $\left\{-\dfrac{25}{4}\right\}$

14) $\dfrac{2k-10}{3k^2} - \dfrac{4k+20}{3k^2} = \dfrac{1}{3k}$

$\{-10\}$

15) $\dfrac{n-3}{6n^2} = \dfrac{1}{n^2} - \dfrac{n+4}{2n^2}$ $\left\{-\dfrac{3}{4}\right\}$

16) $\dfrac{3}{a^2} = \dfrac{2a-10}{3a^2} - \dfrac{1}{3a^2}$

$\{10\}$

17) $\dfrac{1}{2} + \dfrac{n+1}{6n} = \dfrac{3n-6}{2n}$ $\left\{\dfrac{19}{5}\right\}$

18) $\dfrac{x-2}{2x^2} + \dfrac{1}{x^2} = \dfrac{2}{x^2}$

$\{4\}$

19) $1 + \dfrac{1}{2m} = \dfrac{1}{6m}$ $\left\{-\dfrac{1}{3}\right\}$

20) $\dfrac{1}{6n^2} = \dfrac{1}{2n^2} + \dfrac{n+3}{3n^2}$

$\{-4\}$

21) $\dfrac{1}{n^2} = \dfrac{1}{n} + \dfrac{1}{5n^2}$ $\left\{\dfrac{4}{5}\right\}$

22) $\dfrac{b+2}{6b} - \dfrac{b-2}{6b} = \dfrac{1}{6}$

$\{4\}$

23) $\dfrac{n-5}{4n} + \dfrac{1}{n} = \dfrac{5}{4n}$

$\{6\}$

24) $\dfrac{1}{x^2} - \dfrac{x-3}{x^2} = \dfrac{1}{4x}$ $\left\{\dfrac{16}{5}\right\}$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{1}{m} = 1 + \dfrac{4}{m}$

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

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

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

5) $\dfrac{5}{4x} + \dfrac{x-4}{x} = \dfrac{x+4}{4x}$

6) $\dfrac{3}{4n^2} + \dfrac{1}{2n} = \dfrac{n+6}{n^2}$

7) $\dfrac{1}{k} + \dfrac{k-1}{k} = \dfrac{6}{k}$

8) $\dfrac{3}{k} = \dfrac{1}{2k} - \dfrac{1}{2}$

9) $\dfrac{2}{3v} = \dfrac{1}{v} + \dfrac{v+5}{v}$

10) $\dfrac{r-4}{r^2} = \dfrac{r+2}{r^2} + \dfrac{r-5}{r^2}$

11) $\dfrac{2n-10}{n^2} - \dfrac{1}{2n^2} = \dfrac{1}{2n}$

12) $\dfrac{6}{k^2} = \dfrac{1}{k^2} - \dfrac{k+4}{3k^2}$

13) $\dfrac{3r+12}{2r} = 3 - \dfrac{r+5}{2r}$

14) $\dfrac{v+2}{v^2} + \dfrac{1}{4v^2} = \dfrac{1}{4v}$

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

16) $\dfrac{3}{n^2} = \dfrac{3}{2n} + \dfrac{1}{2n^2}$

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

18) $\dfrac{1}{v} = 1 - \dfrac{1}{2v}$

19) $\dfrac{1}{2v} + \dfrac{v-6}{6v} = \dfrac{1}{3v}$

20) $\dfrac{4}{m^2} = \dfrac{1}{m^2} + \dfrac{2m-8}{5m^2}$

21) $\dfrac{5v-25}{v^2} = \dfrac{6}{v^2} - \dfrac{1}{v}$

22) $\dfrac{1}{b} - \dfrac{1}{b^2} = \dfrac{5}{b^2}$

23) $\dfrac{2}{n} + \dfrac{6}{n^2} = \dfrac{4}{n^2}$

24) $\dfrac{5x-25}{x} + \dfrac{1}{5} = 6$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{1}{m} = 1 + \dfrac{4}{m}$

$\{-3\}$

2) $\dfrac{3}{n^2} = \dfrac{1}{n^2} + \dfrac{3}{n}$ $\left\{\dfrac{2}{3}\right\}$

3) $\dfrac{1}{3r^2} = \dfrac{1}{r} - \dfrac{2}{r^2}$ $\left\{\dfrac{7}{3}\right\}$

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

5) $\dfrac{5}{4x} + \dfrac{x - 4}{x} = \dfrac{x + 4}{4x}$

$\{5\}$

6) $\dfrac{3}{4n^2} + \dfrac{1}{2n} = \dfrac{n + 6}{n^2}$ $\left\{-\dfrac{21}{2}\right\}$

7) $\dfrac{1}{k} + \dfrac{k - 1}{k} = \dfrac{6}{k}$

$\{6\}$

8) $\dfrac{3}{k} = \dfrac{1}{2k} - \dfrac{1}{2}$

$\{-5\}$

9) $\dfrac{2}{3v} = \dfrac{1}{v} + \dfrac{v + 5}{v}$ $\left\{-\dfrac{16}{3}\right\}$

10) $\dfrac{r - 4}{r^2} = \dfrac{r + 2}{r^2} + \dfrac{r - 5}{r^2}$

$\{-1\}$

11) $\dfrac{2n - 10}{n^2} - \dfrac{1}{2n^2} = \dfrac{1}{2n}$

$\{7\}$

12) $\dfrac{6}{k^2} = \dfrac{1}{k^2} - \dfrac{k + 4}{3k^2}$

$\{-19\}$

13) $\dfrac{3r + 12}{2r} = 3 - \dfrac{r + 5}{2r}$ $\left\{\dfrac{17}{2}\right\}$

14) $\dfrac{v + 2}{v^2} + \dfrac{1}{4v^2} = \dfrac{1}{4v}$

$\{-3\}$

15) $\dfrac{1}{x} = \dfrac{1}{5x^2} + \dfrac{2}{5x}$ $\left\{\dfrac{1}{3}\right\}$

16) $\dfrac{3}{n^2} = \dfrac{3}{2n} + \dfrac{1}{2n^2}$ $\left\{\dfrac{5}{3}\right\}$

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

$\{2\}$

18) $\dfrac{1}{v} = 1 - \dfrac{1}{2v}$ $\left\{\dfrac{3}{2}\right\}$

19) $\dfrac{1}{2v} + \dfrac{v - 6}{6v} = \dfrac{1}{3v}$

$\{5\}$

20) $\dfrac{4}{m^2} = \dfrac{1}{m^2} + \dfrac{2m - 8}{5m^2}$ $\left\{\dfrac{23}{2}\right\}$

21) $\dfrac{5v - 25}{v^2} = \dfrac{6}{v^2} - \dfrac{1}{v}$ $\left\{\dfrac{31}{6}\right\}$

22) $\dfrac{1}{b} - \dfrac{1}{b^2} = \dfrac{5}{b^2}$

$\{6\}$

23) $\dfrac{2}{n} + \dfrac{6}{n^2} = \dfrac{4}{n^2}$

$\{-1\}$

24) $\dfrac{5x - 25}{x} + \dfrac{1}{5} = 6$ $\left\{-\dfrac{125}{4}\right\}$

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Solve each equation. Remember to check for extraneous solutions.

1) $1 = \dfrac{x+6}{2x} + \dfrac{5}{2x}$

2) $\dfrac{k-5}{6k^2} = \dfrac{1}{3k^2} - \dfrac{1}{2k}$

3) $\dfrac{1}{x} + \dfrac{2}{5x} = \dfrac{6x+12}{5x^2}$

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

5) $\dfrac{k-2}{k} + \dfrac{1}{5} = \dfrac{3}{5}$

6) $\dfrac{a-6}{4a} = \dfrac{a+1}{4a} + \dfrac{1}{2}$

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

8) $\dfrac{4x+20}{5x^2} = \dfrac{1}{5x^2} - \dfrac{1}{5x}$

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

10) $\dfrac{b+5}{6b^2} + \dfrac{6}{b^2} = \dfrac{1}{b^2}$

11) $\dfrac{1}{6x} - \dfrac{1}{3x} = \dfrac{2x+8}{3x^2}$

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

13) $\dfrac{6}{k} - \dfrac{5}{2} = \dfrac{4}{k}$

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

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

16) $\dfrac{1}{6r} + \dfrac{1}{2r^2} = \dfrac{r-4}{r^2}$

17) $\dfrac{1}{4x} - \dfrac{x-2}{x^2} = \dfrac{x-5}{4x^2}$

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

19) $\dfrac{3x-4}{2x^2} = \dfrac{x+4}{4x^2} + \dfrac{x-2}{2x^2}$

20) $1 = \dfrac{1}{3} - \dfrac{1}{3x}$

21) $\dfrac{4}{3m} + \dfrac{1}{3} = \dfrac{1}{m}$

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

23) $\dfrac{1}{r^2} + \dfrac{1}{3r} = \dfrac{1}{3r^2}$

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

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Solve each equation. Remember to check for extraneous solutions.

1) $1 = \dfrac{x+6}{2x} + \dfrac{5}{2x}$

$\{11\}$

2) $\dfrac{k-5}{6k^2} = \dfrac{1}{3k^2} - \dfrac{1}{2k}$ $\{\dfrac{7}{4}\}$

3) $\dfrac{1}{x} + \dfrac{2}{5x} = \dfrac{6x+12}{5x^2}$

$\{12\}$

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

$\{1\}$

5) $\dfrac{k-2}{k} + \dfrac{1}{5} = \dfrac{3}{5}$ $\{\dfrac{10}{3}\}$

6) $\dfrac{a-6}{4a} = \dfrac{a+1}{4a} + \dfrac{1}{2}$ $\{-\dfrac{7}{2}\}$

7) $\dfrac{n-1}{6n} = \dfrac{n-2}{2n} + \dfrac{1}{6}$ $\{\dfrac{5}{3}\}$

8) $\dfrac{4x+20}{5x^2} = \dfrac{1}{5x^2} - \dfrac{1}{5x}$ $\{-\dfrac{19}{5}\}$

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

10) $\dfrac{b+5}{6b^2} + \dfrac{6}{b^2} = \dfrac{1}{b^2}$

$\{-35\}$

11) $\dfrac{1}{6x} - \dfrac{1}{3x} = \dfrac{2x+8}{3x^2}$ $\{-\dfrac{16}{5}\}$

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

13) $\dfrac{6}{k} - \dfrac{5}{2} = \dfrac{4}{k}$ $\{\dfrac{4}{5}\}$

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

$\{3\}$

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

$\{2\}$

16) $\dfrac{1}{6r} + \dfrac{1}{2r^2} = \dfrac{r-4}{r^2}$ $\{\dfrac{27}{5}\}$

17) $\dfrac{1}{4x} - \dfrac{x-2}{x^2} = \dfrac{x-5}{4x^2}$ $\{\dfrac{13}{4}\}$

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

19) $\dfrac{3x-4}{2x^2} = \dfrac{x+4}{4x^2} + \dfrac{x-2}{2x^2}$ $\{\dfrac{8}{3}\}$

20) $1 = \dfrac{1}{3} - \dfrac{1}{3x}$ $\{-\dfrac{1}{2}\}$

21) $\dfrac{4}{3m} + \dfrac{1}{3} = \dfrac{1}{m}$

$\{-1\}$

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

$\{3\}$

23) $\dfrac{1}{r^2} + \dfrac{1}{3r} = \dfrac{1}{3r^2}$

$\{-2\}$

24) $\dfrac{4}{x^2} - \dfrac{3}{x} = \dfrac{1}{2x^2}$ $\{\dfrac{7}{6}\}$

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Solve each equation. Remember to check for extraneous solutions.

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

2) $\dfrac{5}{m^2} = \dfrac{1}{m^2} + \dfrac{m-6}{2m^2}$

3) $\dfrac{1}{r} = \dfrac{r-4}{3r^2} - \dfrac{1}{6r}$

4) $\dfrac{1}{2} = 1 + \dfrac{x-6}{2x}$

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

6) $\dfrac{1}{5x^2} + \dfrac{1}{5x} = \dfrac{5}{x^2}$

7) $\dfrac{1}{6v} + \dfrac{1}{2v^2} = \dfrac{1}{6v^2}$

8) $\dfrac{1}{4p} - \dfrac{1}{2p^2} = \dfrac{1}{4p^2}$

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

10) $\dfrac{1}{2n^2} - \dfrac{1}{2n} = \dfrac{5}{n^2}$

11) $\dfrac{1}{6} + \dfrac{x-6}{2x} = \dfrac{x+5}{3x}$

12) $\dfrac{1}{n^2} + \dfrac{5}{n} = \dfrac{6}{n^2}$

13) $\dfrac{2}{3n^2} + \dfrac{1}{3n} = \dfrac{1}{3n^2}$

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

15) $\dfrac{1}{m^2} = \dfrac{1}{2m^2} - \dfrac{m-6}{4m^2}$

16) $\dfrac{x-1}{2x^2} = \dfrac{1}{2x} - \dfrac{x+5}{2x^2}$

17) $\dfrac{2}{k^2} = \dfrac{1}{k^2} + \dfrac{1}{k}$

18) $\dfrac{1}{x^2} = \dfrac{1}{4x^2} - \dfrac{x+4}{4x^2}$

19) $\dfrac{1}{v} = \dfrac{6}{5v} - \dfrac{1}{5}$

20) $\dfrac{2}{n^2} + \dfrac{3n+15}{n^2} = \dfrac{1}{n}$

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

22) $\dfrac{1}{p} + \dfrac{1}{p^2} = \dfrac{6}{5p^2}$

23) $\dfrac{1}{2x^2} + \dfrac{3}{2x} = \dfrac{5}{2x}$

24) $1 + \dfrac{1}{x} = \dfrac{1}{5x}$

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Solve each equation. Remember to check for extraneous solutions.

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

$\{2\}$

2) $\dfrac{5}{m^2} = \dfrac{1}{m^2} + \dfrac{m-6}{2m^2}$

$\{14\}$

3) $\dfrac{1}{r} = \dfrac{r-4}{3r^2} - \dfrac{1}{6r}$ $\left\{-\dfrac{8}{5}\right\}$

4) $\dfrac{1}{2} = 1 + \dfrac{x-6}{2x}$

$\{3\}$

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

$\{-15\}$

6) $\dfrac{1}{5x^2} + \dfrac{1}{5x} = \dfrac{5}{x^2}$

$\{24\}$

7) $\dfrac{1}{6v} + \dfrac{1}{2v^2} = \dfrac{1}{6v^2}$

$\{-2\}$

8) $\dfrac{1}{4p} - \dfrac{1}{2p^2} = \dfrac{1}{4p^2}$

$\{3\}$

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

$\{2\}$

10) $\dfrac{1}{2n^2} - \dfrac{1}{2n} = \dfrac{5}{n^2}$

$\{-9\}$

11) $\dfrac{1}{6} + \dfrac{x-6}{2x} = \dfrac{x+5}{3x}$

$\{14\}$

12) $\dfrac{1}{n^2} + \dfrac{5}{n} = \dfrac{6}{n^2}$

$\{1\}$

13) $\dfrac{2}{3n^2} + \dfrac{1}{3n} = \dfrac{1}{3n^2}$

$\{-1\}$

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

$\{7\}$

15) $\dfrac{1}{m^2} = \dfrac{1}{2m^2} - \dfrac{m-6}{4m^2}$

$\{4\}$

16) $\dfrac{x-1}{2x^2} = \dfrac{1}{2x} - \dfrac{x+5}{2x^2}$

$\{-4\}$

17) $\dfrac{2}{k^2} = \dfrac{1}{k^2} + \dfrac{1}{k}$

$\{1\}$

18) $\dfrac{1}{x^2} = \dfrac{1}{4x^2} - \dfrac{x+4}{4x^2}$

$\{-7\}$

19) $\dfrac{1}{v} = \dfrac{6}{5v} - \dfrac{1}{5}$

$\{1\}$

20) $\dfrac{2}{n^2} + \dfrac{3n+15}{n^2} = \dfrac{1}{n}$ $\left\{-\dfrac{17}{2}\right\}$

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

$\{-3\}$

22) $\dfrac{1}{p} + \dfrac{1}{p^2} = \dfrac{6}{5p^2}$ $\left\{\dfrac{1}{5}\right\}$

23) $\dfrac{1}{2x^2} + \dfrac{3}{2x} = \dfrac{5}{2x}$ $\left\{\dfrac{1}{2}\right\}$

24) $1 + \dfrac{1}{x} = \dfrac{1}{5x}$ $\left\{-\dfrac{4}{5}\right\}$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{r-3}{5r} = \dfrac{1}{5} - \dfrac{3}{5}$

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

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

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

5) $\dfrac{1}{5a^2} = \dfrac{a-2}{a^2} + \dfrac{2}{a^2}$

6) $\dfrac{b+5}{4b^2} + \dfrac{b-1}{b^2} = \dfrac{2}{b}$

7) $\dfrac{k+2}{6k^2} = \dfrac{3}{k^2} - \dfrac{2k-5}{6k^2}$

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

9) $\dfrac{1}{2a} - \dfrac{5}{2a^2} = \dfrac{1}{2a^2}$

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

11) $\dfrac{1}{2n} = \dfrac{3n-6}{n} - \dfrac{2}{n}$

12) $\dfrac{1}{n} + \dfrac{1}{3} = \dfrac{1}{3n}$

13) $\dfrac{4x-1}{x^2} = \dfrac{5}{2x} + \dfrac{x-5}{2x^2}$

14) $\dfrac{1}{6v^2} = \dfrac{2}{v^2} + \dfrac{1}{2v}$

15) $\dfrac{1}{x^2} = \dfrac{6}{x} + \dfrac{5}{x^2}$

16) $\dfrac{4}{x} - \dfrac{1}{x^2} = \dfrac{5}{x^2}$

17) $\dfrac{1}{x} + \dfrac{4x-4}{x^2} = \dfrac{x+6}{x^2}$

18) $\dfrac{x+4}{3x} + \dfrac{1}{6x} = \dfrac{1}{2x}$

19) $\dfrac{1}{3p^2} + \dfrac{1}{3p} = \dfrac{1}{p^2}$

20) $\dfrac{3x+9}{x^2} + \dfrac{5}{2x^2} = \dfrac{1}{x^2}$

21) $\dfrac{4}{v^2} - \dfrac{v-1}{4v^2} = \dfrac{1}{4v}$

22) $\dfrac{1}{6n^2} - \dfrac{1}{6n} = \dfrac{5}{6n^2}$

23) $\dfrac{1}{x} = \dfrac{1}{2x} + \dfrac{x-5}{x}$

24) $\dfrac{1}{n^2} = \dfrac{1}{2n^2} + \dfrac{1}{4n}$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{r-3}{5r} = \dfrac{1}{5} - \dfrac{3}{5}$

   $\{1\}$

2) $\dfrac{v+5}{v^2} + \dfrac{1}{5v} = \dfrac{4v-4}{5v^2}$ $\left\{-\dfrac{29}{2}\right\}$

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

4) $3 - \dfrac{1}{p} = \dfrac{p+2}{2p}$ $\left\{\dfrac{4}{5}\right\}$

5) $\dfrac{1}{5a^2} = \dfrac{a-2}{a^2} + \dfrac{2}{a^2}$ $\left\{\dfrac{1}{5}\right\}$

6) $\dfrac{b+5}{4b^2} + \dfrac{b-1}{b^2} = \dfrac{2}{b}$ $\left\{\dfrac{1}{3}\right\}$

7) $\dfrac{k+2}{6k^2} = \dfrac{3}{k^2} - \dfrac{2k-5}{6k^2}$

   $\{7\}$

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

   $\{3\}$

9) $\dfrac{1}{2a} - \dfrac{5}{2a^2} = \dfrac{1}{2a^2}$

   $\{6\}$

10) $\dfrac{1}{n^2} - \dfrac{1}{n} = \dfrac{1}{2n}$ $\left\{\dfrac{2}{3}\right\}$

11) $\dfrac{1}{2n} = \dfrac{3n-6}{n} - \dfrac{2}{n}$ $\left\{\dfrac{17}{6}\right\}$

12) $\dfrac{1}{n} + \dfrac{1}{3} = \dfrac{1}{3n}$

    $\{-2\}$

13) $\dfrac{4x-1}{x^2} = \dfrac{5}{2x} + \dfrac{x-5}{2x^2}$ $\left\{-\dfrac{3}{2}\right\}$

14) $\dfrac{1}{6v^2} = \dfrac{2}{v^2} + \dfrac{1}{2v}$ $\left\{-\dfrac{11}{3}\right\}$

15) $\dfrac{1}{x^2} = \dfrac{6}{x} + \dfrac{5}{x^2}$ $\left\{-\dfrac{2}{3}\right\}$

16) $\dfrac{4}{x} - \dfrac{1}{x^2} = \dfrac{5}{x^2}$ $\left\{\dfrac{3}{2}\right\}$

17) $\dfrac{1}{x} + \dfrac{4x-4}{x^2} = \dfrac{x+6}{x^2}$ $\left\{\dfrac{5}{2}\right\}$

18) $\dfrac{x+4}{3x} + \dfrac{1}{6x} = \dfrac{1}{2x}$

    $\{-3\}$

19) $\dfrac{1}{3p^2} + \dfrac{1}{3p} = \dfrac{1}{p^2}$

    $\{2\}$

20) $\dfrac{3x+9}{x^2} + \dfrac{5}{2x^2} = \dfrac{1}{x^2}$ $\left\{-\dfrac{7}{2}\right\}$

21) $\dfrac{4}{v^2} - \dfrac{v-1}{4v^2} = \dfrac{1}{4v}$ $\left\{\dfrac{17}{2}\right\}$

22) $\dfrac{1}{6n^2} - \dfrac{1}{6n} = \dfrac{5}{6n^2}$

    $\{-4\}$

23) $\dfrac{1}{x} = \dfrac{1}{2x} + \dfrac{x-5}{x}$ $\left\{\dfrac{11}{2}\right\}$

24) $\dfrac{1}{n^2} = \dfrac{1}{2n^2} + \dfrac{1}{4n}$

    $\{2\}$

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Solve each equation. Remember to check for extraneous solutions.

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

2) $\dfrac{r+2}{6r} - \dfrac{1}{3r} = \dfrac{3r-18}{2r}$

3) $\dfrac{m-1}{m} = \dfrac{m+4}{5m} - \dfrac{1}{5m}$

4) $\dfrac{v+6}{4v} = \dfrac{v+2}{2v} + \dfrac{3v-18}{4v}$

5) $\dfrac{1}{k^2} - \dfrac{2}{k} = \dfrac{1}{k}$

6) $\dfrac{6}{k} + \dfrac{3}{k^2} = \dfrac{1}{k^2}$

7) $1 + \dfrac{1}{b} = \dfrac{3}{b}$

8) $\dfrac{1}{x^2} = \dfrac{2}{x^2} + \dfrac{x+4}{2x^2}$

9) $\dfrac{1}{4x^2} + \dfrac{x-5}{x^2} = \dfrac{1}{2x^2}$

10) $\dfrac{1}{5m^2} + \dfrac{6}{5m} = \dfrac{1}{5m}$

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

12) $\dfrac{4}{3} - \dfrac{6}{x} = \dfrac{1}{3}$

13) $\dfrac{1}{k^2} = \dfrac{k+6}{2k^2} + \dfrac{1}{2k^2}$

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

15) $\dfrac{1}{2} + \dfrac{6}{n} = \dfrac{5}{n}$

16) $\dfrac{v+4}{6v} + 2 = \dfrac{v+3}{v}$

17) $\dfrac{x-5}{3x} + \dfrac{1}{x} = 1$

18) $1 = \dfrac{1}{r} + \dfrac{1}{5}$

19) $\dfrac{3x-12}{5x^2} - \dfrac{1}{x^2} = \dfrac{1}{5x^2}$

20) $\dfrac{1}{2} + \dfrac{x+1}{2x} = \dfrac{1}{4}$

21) $\dfrac{6n-24}{n^2} = \dfrac{1}{n} + \dfrac{n-4}{5n^2}$

22) $\dfrac{m-5}{3m^2} = \dfrac{m+2}{2m^2} + \dfrac{1}{2m^2}$

23) $\dfrac{1}{2k^2} = \dfrac{1}{k^2} + \dfrac{k-5}{k^2}$

24) $\dfrac{1}{5n} - \dfrac{3}{5} = \dfrac{n-3}{5n}$

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Solve each equation. Remember to check for extraneous solutions.

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

   $\{1\}$

2) $\dfrac{r+2}{6r} - \dfrac{1}{3r} = \dfrac{3r-18}{2r}$ $\{\dfrac{27}{4}\}$

3) $\dfrac{m-1}{m} = \dfrac{m+4}{5m} - \dfrac{1}{5m}$

   $\{2\}$

4) $\dfrac{v+6}{4v} = \dfrac{v+2}{2v} + \dfrac{3v-18}{4v}$

   $\{5\}$

5) $\dfrac{1}{k^2} - \dfrac{2}{k} = \dfrac{1}{k}$ $\{\dfrac{1}{3}\}$

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

7) $1 + \dfrac{1}{b} = \dfrac{3}{b}$

   $\{2\}$

8) $\dfrac{1}{x^2} = \dfrac{2}{x^2} + \dfrac{x+4}{2x^2}$

   $\{-6\}$

9) $\dfrac{1}{4x^2} + \dfrac{x-5}{x^2} = \dfrac{1}{2x^2}$ $\{\dfrac{21}{4}\}$

10) $\dfrac{1}{5m^2} + \dfrac{6}{5m} = \dfrac{1}{5m}$ $\{-\dfrac{1}{5}\}$

11) $\dfrac{1}{2x^2} + \dfrac{3x+6}{2x^2} = \dfrac{1}{x^2}$ $\{-\dfrac{5}{3}\}$

12) $\dfrac{4}{3} - \dfrac{6}{x} = \dfrac{1}{3}$

    $\{6\}$

13) $\dfrac{1}{k^2} = \dfrac{k+6}{2k^2} + \dfrac{1}{2k^2}$

    $\{-5\}$

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

    $\{-5\}$

15) $\dfrac{1}{2} + \dfrac{6}{n} = \dfrac{5}{n}$

    $\{-2\}$

16) $\dfrac{v+4}{6v} + 2 = \dfrac{v+3}{v}$

    $\{2\}$

17) $\dfrac{x-5}{3x} + \dfrac{1}{x} = 1$

    $\{-1\}$

18) $1 = \dfrac{1}{r} + \dfrac{1}{5}$ $\{\dfrac{5}{4}\}$

19) $\dfrac{3x-12}{5x^2} - \dfrac{1}{x^2} = \dfrac{1}{5x^2}$

    $\{6\}$

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

21) $\dfrac{6n-24}{n^2} = \dfrac{1}{n} + \dfrac{n-4}{5n^2}$ $\{\dfrac{29}{6}\}$

22) $\dfrac{m-5}{3m^2} = \dfrac{m+2}{2m^2} + \dfrac{1}{2m^2}$

    $\{-19\}$

23) $\dfrac{1}{2k^2} = \dfrac{1}{k^2} + \dfrac{k-5}{k^2}$ $\{\dfrac{9}{2}\}$

24) $\dfrac{1}{5n} - \dfrac{3}{5} = \dfrac{n-3}{5n}$

    $\{1\}$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{2}{3x} + \dfrac{x+5}{x} = \dfrac{1}{3}$

2) $\dfrac{2}{a} + \dfrac{a+6}{2a} = \dfrac{1}{2a}$

3) $\dfrac{1}{6a} - \dfrac{1}{6} = \dfrac{2a-10}{3a}$

4) $\dfrac{2}{x} = \dfrac{5}{x} + 1$

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

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

7) $\dfrac{1}{2x} = \dfrac{x+1}{x} - \dfrac{1}{6x}$

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

9) $\dfrac{6}{x} = \dfrac{1}{x} - 1$

10) $\dfrac{1}{r^2} + \dfrac{6}{r} = \dfrac{3r-6}{r^2}$

11) $\dfrac{1}{v} + 1 = \dfrac{3}{v}$

12) $\dfrac{3}{5} = 1 - \dfrac{a-3}{a}$

13) $2 - \dfrac{v+6}{v} = \dfrac{v-3}{4v}$

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

15) $\dfrac{2v+4}{v} = \dfrac{6}{v} - 1$

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

17) $\dfrac{1}{r} = 1 - \dfrac{2}{r}$

18) $6 + \dfrac{1}{3a} = \dfrac{4}{3a}$

19) $\dfrac{1}{r} - \dfrac{2r-6}{r} = \dfrac{1}{3}$

20) $\dfrac{1}{n} = \dfrac{n-2}{2n} - \dfrac{3}{n}$

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

22) $\dfrac{1}{n} + \dfrac{1}{n^2} = \dfrac{3}{n^2}$

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

24) $\dfrac{1}{2k^2} + \dfrac{1}{4k} = \dfrac{1}{k^2}$

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{2}{3x} + \dfrac{x+5}{x} = \dfrac{1}{3}$ $\left\{-\dfrac{17}{2}\right\}$

2) $\dfrac{2}{a} + \dfrac{a+6}{2a} = \dfrac{1}{2a}$

   $\{-9\}$

3) $\dfrac{1}{6a} - \dfrac{1}{6} = \dfrac{2a-10}{3a}$ $\left\{\dfrac{21}{5}\right\}$

4) $\dfrac{2}{x} = \dfrac{5}{x} + 1$

   $\{-3\}$

5) $\dfrac{n-6}{n} + \dfrac{2n-1}{6n} = \dfrac{n-2}{2n}$ $\left\{\dfrac{31}{5}\right\}$

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

7) $\dfrac{1}{2x} = \dfrac{x+1}{x} - \dfrac{1}{6x}$ $\left\{-\dfrac{1}{3}\right\}$

8) $\dfrac{1}{x^2} = \dfrac{1}{6x^2} + \dfrac{2}{3x}$ $\left\{\dfrac{5}{4}\right\}$

9) $\dfrac{6}{x} = \dfrac{1}{x} - 1$

   $\{-5\}$

10) $\dfrac{1}{r^2} + \dfrac{6}{r} = \dfrac{3r-6}{r^2}$ $\left\{-\dfrac{7}{3}\right\}$

11) $\dfrac{1}{v} + 1 = \dfrac{3}{v}$

   $\{2\}$

12) $\dfrac{3}{5} = 1 - \dfrac{a-3}{a}$

   $\{5\}$

13) $2 - \dfrac{v+6}{v} = \dfrac{v-3}{4v}$

   $\{7\}$

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

   $\{2\}$

15) $\dfrac{2v+4}{v} = \dfrac{6}{v} - 1$ $\left\{\dfrac{2}{3}\right\}$

16) $\dfrac{1}{x^2} - \dfrac{1}{x} = \dfrac{4}{3x^2}$ $\left\{-\dfrac{1}{3}\right\}$

17) $\dfrac{1}{r} = 1 - \dfrac{2}{r}$

   $\{3\}$

18) $6 + \dfrac{1}{3a} = \dfrac{4}{3a}$ $\left\{\dfrac{1}{6}\right\}$

19) $\dfrac{1}{r} - \dfrac{2r-6}{r} = \dfrac{1}{3}$

   $\{3\}$

20) $\dfrac{1}{n} = \dfrac{n-2}{2n} - \dfrac{3}{n}$

   $\{10\}$

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

   $\{-4\}$

22) $\dfrac{1}{n} + \dfrac{1}{n^2} = \dfrac{3}{n^2}$

   $\{2\}$

23) $\dfrac{4}{3n^2} + \dfrac{n-4}{n^2} = \dfrac{1}{n^2}$ $\left\{\dfrac{11}{3}\right\}$

24) $\dfrac{1}{2k^2} + \dfrac{1}{4k} = \dfrac{1}{k^2}$

   $\{2\}$

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Solve each equation. Remember to check for extraneous solutions.

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

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

3) $\dfrac{5}{a^2} + \dfrac{1}{a} = \dfrac{3a+15}{a^2}$

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

5) $\dfrac{3}{2} + \dfrac{1}{2b} = \dfrac{1}{4b}$

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

7) $\dfrac{a-6}{a^2} = \dfrac{5}{3a} + \dfrac{1}{a}$

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

9) $\dfrac{1}{2k^2} = \dfrac{k-2}{k^2} - \dfrac{2}{k^2}$

10) $\dfrac{1}{2k^2} = \dfrac{1}{k} - \dfrac{1}{k^2}$

11) $\dfrac{3}{2p^2} + \dfrac{1}{4p} = \dfrac{1}{4p^2}$

12) $\dfrac{1}{x} = \dfrac{4x+4}{x^2} - \dfrac{1}{x^2}$

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

14) $\dfrac{5}{n} + \dfrac{1}{n} = \dfrac{4n-12}{n^2}$

15) $\dfrac{x+5}{x} + \dfrac{5}{3x} = \dfrac{5}{3}$

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

17) $\dfrac{4v+20}{5v} = 1 + \dfrac{4}{5v}$

18) $\dfrac{1}{b^2} - \dfrac{4}{5b} = \dfrac{1}{5b}$

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

20) $\dfrac{1}{n} + 1 = \dfrac{1}{2n}$

21) $\dfrac{2x+12}{3x} + \dfrac{2}{x} = \dfrac{3}{x}$

22) $\dfrac{3}{5k} + \dfrac{1}{5k^2} = \dfrac{2}{5k}$

23) $\dfrac{1}{r} - \dfrac{r+6}{3r^2} = \dfrac{r-1}{r^2}$

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

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Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{1}{2v^2} - \dfrac{v+3}{v^2} = \dfrac{1}{v^2}$ $\left\{-\dfrac{7}{2}\right\}$

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

$\{18\}$

3) $\dfrac{5}{a^2} + \dfrac{1}{a} = \dfrac{3a+15}{a^2}$

$\{-5\}$

4) $\dfrac{5}{n^2} = \dfrac{5}{n} + \dfrac{1}{n^2}$ $\left\{\dfrac{4}{5}\right\}$

5) $\dfrac{3}{2} + \dfrac{1}{2b} = \dfrac{1}{4b}$ $\left\{-\dfrac{1}{6}\right\}$

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

$\{-12\}$

7) $\dfrac{a-6}{a^2} = \dfrac{5}{3a} + \dfrac{1}{a}$ $\left\{-\dfrac{18}{5}\right\}$

8) $\dfrac{1}{6x} = \dfrac{1}{2} - \dfrac{3}{x}$ $\left\{\dfrac{19}{3}\right\}$

9) $\dfrac{1}{2k^2} = \dfrac{k-2}{k^2} - \dfrac{2}{k^2}$ $\left\{\dfrac{9}{2}\right\}$

10) $\dfrac{1}{2k^2} = \dfrac{1}{k} - \dfrac{1}{k^2}$ $\left\{\dfrac{3}{2}\right\}$

11) $\dfrac{3}{2p^2} + \dfrac{1}{4p} = \dfrac{1}{4p^2}$

$\{-5\}$

12) $\dfrac{1}{x} = \dfrac{4x+4}{x^2} - \dfrac{1}{x^2}$

$\{-1\}$

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

$\{-1\}$

14) $\dfrac{5}{n} + \dfrac{1}{n} = \dfrac{4n-12}{n^2}$

$\{-6\}$

15) $\dfrac{x+5}{x} + \dfrac{5}{3x} = \dfrac{5}{3}$

$\{10\}$

16) $\dfrac{3}{m} = \dfrac{1}{2m} + \dfrac{1}{2m^2}$ $\left\{\dfrac{1}{5}\right\}$

17) $\dfrac{4v+20}{5v} = 1 + \dfrac{4}{5v}$

$\{16\}$

18) $\dfrac{1}{b^2} - \dfrac{4}{5b} = \dfrac{1}{5b}$

$\{1\}$

19) $\dfrac{x+1}{6x^2} = \dfrac{1}{6x} - \dfrac{1}{x}$ $\left\{-\dfrac{1}{6}\right\}$

20) $\dfrac{1}{n} + 1 = \dfrac{1}{2n}$ $\left\{-\dfrac{1}{2}\right\}$

21) $\dfrac{2x+12}{3x} + \dfrac{2}{x} = \dfrac{3}{x}$ $\left\{-\dfrac{9}{2}\right\}$

22) $\dfrac{3}{5k} + \dfrac{1}{5k^2} = \dfrac{2}{5k}$

$\{-1\}$

23) $\dfrac{1}{r} - \dfrac{r+6}{3r^2} = \dfrac{r-1}{r^2}$

$\{-3\}$

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

$\{20\}$

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Solve each equation. Remember to check for extraneous solutions.

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

2) $\dfrac{1}{3x^2} = \dfrac{5}{3x} + \dfrac{1}{x^2}$

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

4) $\dfrac{1}{v^2} + \dfrac{1}{v} = \dfrac{1}{2v^2}$

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

6) $1 - \dfrac{1}{n} = \dfrac{5}{n}$

7) $\dfrac{3}{x^2} + \dfrac{1}{x} = \dfrac{1}{x^2}$

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

9) $\dfrac{1}{2v^2} = \dfrac{1}{6v} + \dfrac{1}{v^2}$

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

11) $\dfrac{1}{x^2} = \dfrac{4}{5x^2} - \dfrac{x-3}{5x^2}$

12) $\dfrac{5}{2x} = \dfrac{x+6}{x^2} + \dfrac{x-6}{2x^2}$

13) $\dfrac{5r+25}{3r^2} = \dfrac{1}{3r} + \dfrac{r-2}{r^2}$

14) $\dfrac{1}{m} = \dfrac{1}{3m} + \dfrac{4}{3}$

15) $\dfrac{6}{m^2} = \dfrac{1}{2m^2} - \dfrac{5m-3}{m^2}$

16) $\dfrac{1}{6v} = \dfrac{1}{6v^2} + \dfrac{1}{3v}$

17) $1 + \dfrac{1}{m} = \dfrac{m-2}{2m}$

18) $\dfrac{1}{x^2} + \dfrac{1}{x} = \dfrac{4}{x^2}$

19) $\dfrac{1}{n^2} + \dfrac{n+5}{n^2} = \dfrac{5}{n}$

20) $\dfrac{3}{a} = \dfrac{5}{a} + \dfrac{a+5}{a}$

21) $\dfrac{5}{2} = \dfrac{r-1}{4r} + \dfrac{r+3}{r}$

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

23) $\dfrac{p+3}{3p^2} = \dfrac{1}{3p} + \dfrac{p-2}{3p^2}$

24) $\dfrac{6}{x^2} = \dfrac{1}{4x^2} + \dfrac{1}{2x}$

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Assignment   Date_____ Period____

Solve each equation. Remember to check for extraneous solutions.

1) $\dfrac{1}{2x} = \dfrac{1}{6x^2} + \dfrac{1}{6x}$ $\left\{\dfrac{1}{2}\right\}$

2) $\dfrac{1}{3x^2} = \dfrac{5}{3x} + \dfrac{1}{x^2}$ $\left\{-\dfrac{2}{5}\right\}$

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

   $\{4\}$

4) $\dfrac{1}{v^2} + \dfrac{1}{v} = \dfrac{1}{2v^2}$ $\left\{-\dfrac{1}{2}\right\}$

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

   $\{-2\}$

6) $1 - \dfrac{1}{n} = \dfrac{5}{n}$

   $\{6\}$

7) $\dfrac{3}{x^2} + \dfrac{1}{x} = \dfrac{1}{x^2}$

   $\{-2\}$

8) $\dfrac{1}{6} = \dfrac{1}{6n} - \dfrac{1}{2}$ $\left\{\dfrac{1}{4}\right\}$

9) $\dfrac{1}{2v^2} = \dfrac{1}{6v} + \dfrac{1}{v^2}$

   $\{-3\}$

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

    $\{-1\}$

11) $\dfrac{1}{x^2} = \dfrac{4}{5x^2} - \dfrac{x-3}{5x^2}$

    $\{2\}$

12) $\dfrac{5}{2x} = \dfrac{x+6}{x^2} + \dfrac{x-6}{2x^2}$

    $\{3\}$

13) $\dfrac{5r+25}{3r^2} = \dfrac{1}{3r} + \dfrac{r-2}{r^2}$

    $\{-31\}$

14) $\dfrac{1}{m} = \dfrac{1}{3m} + \dfrac{4}{3}$ $\left\{\dfrac{1}{2}\right\}$

15) $\dfrac{6}{m^2} = \dfrac{1}{2m^2} - \dfrac{5m-3}{m^2}$ $\left\{-\dfrac{1}{2}\right\}$

16) $\dfrac{1}{6v} = \dfrac{1}{6v^2} + \dfrac{1}{3v}$

    $\{-1\}$

17) $1 + \dfrac{1}{m} = \dfrac{m-2}{2m}$

    $\{-4\}$

18) $\dfrac{1}{x^2} + \dfrac{1}{x} = \dfrac{4}{x^2}$

    $\{3\}$

19) $\dfrac{1}{n^2} + \dfrac{n+5}{n^2} = \dfrac{5}{n}$ $\left\{\dfrac{3}{2}\right\}$

20) $\dfrac{3}{a} = \dfrac{5}{a} + \dfrac{a+5}{a}$

    $\{-7\}$

21) $\dfrac{5}{2} = \dfrac{r-1}{4r} + \dfrac{r+3}{r}$ $\left\{\dfrac{11}{5}\right\}$

22) $\dfrac{1}{4x} = \dfrac{3}{2x} - \dfrac{1}{4x^2}$ $\left\{\dfrac{1}{5}\right\}$

23) $\dfrac{p+3}{3p^2} = \dfrac{1}{3p} + \dfrac{p-2}{3p^2}$

    $\{5\}$

24) $\dfrac{6}{x^2} = \dfrac{1}{4x^2} + \dfrac{1}{2x}$ $\left\{\dfrac{23}{2}\right\}$