

Taking the square root part I with rationalizing denominator Date _____

Solve each equation by taking square roots.

1) $5m^2 - 8 = 12$

2) $4a^2 + 1 = 29$

3) $4n^2 + 8 = 208$

4) $6m^2 + 8 = 128$

5) $8b^2 - 1 = 319$

6) $3n^2 + 3 = 27$

7) $5k^2 + 1 = 141$

8) $4n^2 - 5 = 111$

9) $9n^2 - 1 = 8$

10) $3a^2 + 4 = 79$

11) $8v^2 - 9 = 119$

12) $9 - 3x^2 = -39$

13) $9r^2 + 4 = 148$

14) $81r^2 - 7 = 29$

15) $4n^2 + 7 = 32$

16) $2x^2 + 5 = 133$

17) $4k^2 + 10 = 14$

18) $3 - 6x^2 = -21$

Simplify.

19) $\frac{\sqrt{2}}{\sqrt{5}}$

20) $\frac{10}{\sqrt{2}}$

21) $\frac{\sqrt{5}}{\sqrt{7}}$

22) $\frac{\sqrt{7}}{\sqrt{6}}$

23) $-\frac{4}{\sqrt{10}}$

24) $\frac{9}{\sqrt{8}}$

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$\{2, -2\}$

2) $4a^2 + 1 = 29$

$\{\sqrt{7}, -\sqrt{7}\}$

3) $4n^2 + 8 = 208$

$\{5\sqrt{2}, -5\sqrt{2}\}$

4) $6m^2 + 8 = 128$

$\{2\sqrt{5}, -2\sqrt{5}\}$

5) $8b^2 - 1 = 319$

$\{2\sqrt{10}, -2\sqrt{10}\}$

6) $3n^2 + 3 = 27$

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7) $5k^2 + 1 = 141$

$\{2\sqrt{7}, -2\sqrt{7}\}$

8) $4n^2 - 5 = 111$

$\{\sqrt{29}, -\sqrt{29}\}$

9) $9n^2 - 1 = 8$

$\{1, -1\}$

10) $3a^2 + 4 = 79$

$\{5, -5\}$

11) $8v^2 - 9 = 119$

$\{4, -4\}$

12) $9 - 3x^2 = -39$

$\{4, -4\}$

13) $9r^2 + 4 = 148$

$\{4, -4\}$

14) $81r^2 - 7 = 29$

$\{\frac{2}{3}, -\frac{2}{3}\}$

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$\{\frac{5}{2}, -\frac{5}{2}\}$

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$\{8, -8\}$

17) $4k^2 + 10 = 14$

$\{1, -1\}$

18) $3 - 6x^2 = -21$

$\{2, -2\}$

Simplify.

19) $\frac{\sqrt{2}}{\sqrt{5}} \frac{\sqrt{10}}{5}$

20) $\frac{10}{\sqrt{2}}$

$5\sqrt{2}$

21) $\frac{\sqrt{5}}{\sqrt{7}} \frac{\sqrt{35}}{7}$

22) $\frac{\sqrt{7}}{\sqrt{6}} \frac{\sqrt{42}}{6}$

23) $-\frac{4}{\sqrt{10}} - \frac{2\sqrt{10}}{5}$

24) $\frac{9}{\sqrt{8}} \frac{9\sqrt{2}}{4}$