

Homework Questions

$$\textcircled{5} (\sqrt{a-6})^2 = (3)^2$$

$$a-6=9$$

$$a=15$$

$$\textcircled{7} t = \sqrt{\frac{d}{16}}$$

$$6^2 = \left(\sqrt{\frac{d}{16}}\right)^2$$

$$16 \cdot 36 = \frac{d}{16} \cdot 16$$

$$576 = d$$

$$\textcircled{21} (x)^2 = (\sqrt{2x+3})^2$$

$$x^2 = 2x+3$$

$$x^2 - 2x - 3 = 0$$

$$(x-3)(x+1) = 0$$

$$\begin{array}{r} -3 \\ \times 1 \\ \hline -2 \end{array}$$

$$\boxed{x=3} \text{ } \times \quad 3 = \sqrt{6+3}$$

$$3 = \sqrt{9}$$

$$-1 = \sqrt{-2+3}$$

$$-1 = \sqrt{1}$$

$$\textcircled{25} \frac{-2\sqrt{2r+5}}{-2} = \frac{6}{-2}$$

$$\sqrt{2r+5} = -3^2$$

$$2r+5=9$$

$$2r=4$$

$$r=2$$

$$\checkmark: -2\sqrt{4+5} = 6$$

$$-2\sqrt{9} = 6$$

$$-2 \cdot 3 \neq 6$$

Partners for Activity

Per 7

Will
Quin

Josh
Ethan

Ellie
Maddie
Ariel

Seth
Dawson

Tyler H
Zach

Gillian
Jakob

Raegan
Ruth

Abrianna
Corey

Sophie
Kate

Sophia
Ronan

Santiago
Fedora

Harrison
Tyler W

Simplify each radical expression.

1. $\sqrt{32} \cdot \sqrt{144} =$

$$\sqrt{16 \cdot 2} \cdot 12$$

$$4\sqrt{2} \cdot 12 = 48\sqrt{2}$$

3. $\sqrt{5h} \cdot \sqrt{50h} =$

$$h\sqrt{5h} \cdot \sqrt{25 \cdot 2h}$$

$$h\sqrt{5h} \cdot 5\sqrt{2h}$$

$$5h\sqrt{10h^2}$$

$$5h^2\sqrt{10}$$

2. $\sqrt{96c^3} \cdot \sqrt{25c} =$

$$\sqrt{32 \cdot 3c^3} \cdot 5\sqrt{c}$$

$$\sqrt{16 \cdot 2 \cdot 3c^3} \cdot 5\sqrt{c}$$

$$4c\sqrt{6c} \cdot 5\sqrt{c}$$

$$20c\sqrt{6c^2}$$

$$20c^2\sqrt{6}$$

4. $\frac{\sqrt{8}}{\sqrt{32}} =$

$$\frac{\sqrt{4 \cdot 2}}{\sqrt{16 \cdot 2}}$$

$$\frac{2\sqrt{2}}{4\sqrt{2}} = \frac{1}{2}$$

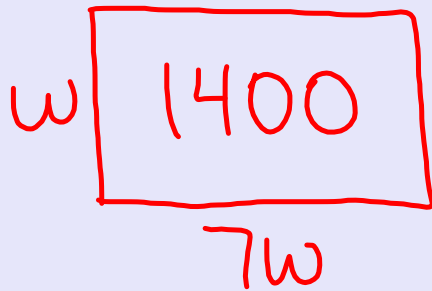
Simplify each radical expression.

$$5. \frac{2\sqrt{6k^2}}{\sqrt{9k^4}} = \frac{2\cancel{k}\sqrt{6}}{3\cancel{k^2}}$$

$$\frac{2\sqrt{6}}{3k}$$

$$6. \frac{\sqrt{225}}{\sqrt{100}} = \frac{15}{10} = \frac{3}{2}$$

7. A rectangle is 7 times as long as it is wide. Its area is 1400 cm². Find the dimensions of the rectangle in simplest radical form.



$$7w \cdot w = 1400$$

$$7w^2 = 1400$$

$$\sqrt{w^2} = \sqrt{200}$$

$$= \sqrt{100 \cdot 2}$$

$$w = 10\sqrt{2}$$

Simplify each radical expression.

8. $6\sqrt{7} - 2\sqrt{28} =$

$$6\sqrt{7} - 2\sqrt{4 \cdot 7}$$

$$6\sqrt{7} - 4\sqrt{7} = 2\sqrt{7}$$

10. $\sqrt{54} - 2\sqrt{6} =$

$$\sqrt{9 \cdot 6} - 2\sqrt{6}$$

$$3\sqrt{6} - 2\sqrt{6} = \sqrt{6}$$

9. $5(\sqrt{20} + \sqrt{80}) =$

$$5(\sqrt{4 \cdot 5} + \sqrt{16 \cdot 5})$$

$$5(2\sqrt{5} + 4\sqrt{5})$$

$$5(6\sqrt{5}) = 30\sqrt{5}$$

11. $\sqrt{10}(\sqrt{10} - \sqrt{20}) =$

Simplify each radical expression.

12. $(\sqrt{2} + \sqrt{7})(3\sqrt{2} - \sqrt{7}) =$

13. $(\sqrt{5} - 4\sqrt{3})^2 =$

Solve each radical equation.

14. $\sqrt{x+7} = 3$

15. $4 = \sqrt{n-1}$

Solve each radical equation.

16. $\sqrt{x+7} = \sqrt{2x-1}$

Homework
Pg 655 #9-25 odd,
31-47 odd