

Warm - Up
3/25/2019

Simplify (no calculator/no decimals)

$$3\sqrt{24}$$

$$3\sqrt{4 \cdot 6}$$

$$3\sqrt{4} \cdot \sqrt{6}$$

$$3 \cdot 2 \sqrt{6}$$


$$6\sqrt{6}$$

Simplifying Square Roots Using Prime Factorization

Simplify using prime factorization

$$\sqrt{126}$$

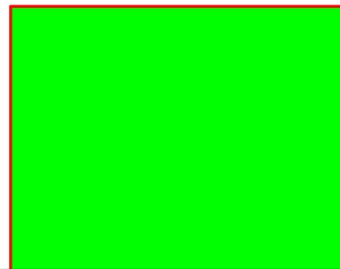
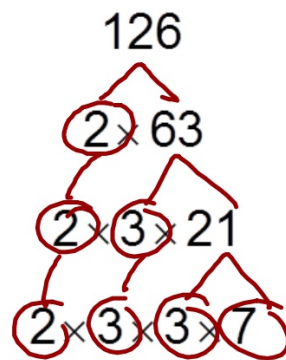
$$\sqrt{2 \times 3 \times 3 \times 7}$$

$$\sqrt{9 \times 14}$$

$$\sqrt{9} \sqrt{14}$$

$$3\sqrt{14}$$

prod
prop



Simplify using prime factorization

$$\sqrt{294}$$

$$\sqrt{2 \cdot 3 \cdot \underbrace{7 \cdot 7}_{\text{min}}}$$

$$\sqrt{49} \cdot \sqrt{6}$$

$$\boxed{7\sqrt{6}}$$

Simplify using prime factorization

$$-2\sqrt{135} = -2\sqrt{3 \cdot 3 \cdot 3 \cdot 5}$$

$$-2\sqrt{9 \times 15}$$

$$-2\sqrt{9}\sqrt{15}$$

$$-2(3)\sqrt{15}$$

$$-6\sqrt{15}$$



Simplify using prime factorization

$$-\sqrt{396} = \sqrt{3 \cdot 3 \cdot 2 \cdot 2 \cdot 11} \quad -\sqrt{396} = \sqrt{2 \cdot 3 \cdot 2 \cdot 3 \cdot 11}$$

$$-\sqrt{4 \times 9 \times 11}$$

$$-\sqrt{36 \times 11}$$

$$-\sqrt{4} \sqrt{9} \sqrt{11}$$

$$-\sqrt{36} \sqrt{11}$$

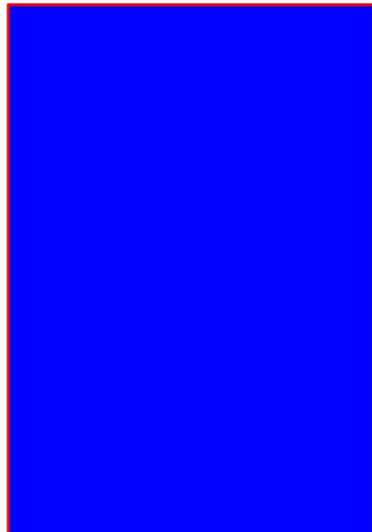
$$-(2)(3) \sqrt{11}$$

$$-6 \sqrt{11}$$

$$-6 \sqrt{11}$$

Simplify using prime factorization

$$-\sqrt{396}$$



Simplify using prime factorization

$$7\sqrt{480}$$

$$480$$

$$7\sqrt{4 \times 4 \times 30}$$

$$2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 5$$

$$7\sqrt{4}\sqrt{4}\sqrt{30}$$

$$7(2)(2)\sqrt{30}$$

$$28\sqrt{30}$$

$$480 = 48 \cdot 10$$
$$\sqrt{400} = 20$$
$$\sqrt{80}$$



Homework (due **Thursday)**
p.113 (10 - 17)