



Feb. 12 - bell ringer

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Simplify

$$1) \frac{3\sqrt{3}}{-2+\sqrt{6}}$$

$$2) \frac{2\sqrt{5}}{2\sqrt{7}+3\sqrt{3}}$$

$$\frac{3\sqrt{3}}{-2+\sqrt{6}} \cdot \frac{-2-\sqrt{6}}{-2-\sqrt{6}}$$

$$4\sqrt{35}-6\sqrt{15}$$

$$\frac{-6\sqrt{3}-3\sqrt{18}}{4-6}$$

$$\frac{-6\sqrt{3}-9\sqrt{2}}{-2}$$

$$\frac{6\sqrt{3}+9\sqrt{2}}{2}$$

Section 10-4, page 635

Learning target :

You can add ,subtract, multiply and divide with radical expressions.

Simplify.

1.(review) $7x - 5y + 2x = 9x - 5y$

2) $6\sqrt{2} - 7\sqrt{2} + 5\sqrt{2} = 4\sqrt{2}$

3)

$$15\sqrt{3} - 14\sqrt{5} + 6\sqrt{5} + 11\sqrt{3}$$

$$\underline{26\sqrt{3} - 8\sqrt{5}}$$

④ $4\sqrt{54} + 2\sqrt{24}$

$$4\sqrt[3]{9 \cdot 6} + 2\sqrt[2]{4 \cdot 6}$$

$$12\sqrt{6} + 4\sqrt{6} = 16\sqrt{6}$$

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$$3\sqrt{45} + \sqrt{20} - \sqrt{245}$$

$$3\sqrt{9 \cdot 5} + \sqrt{4 \cdot 5} - \sqrt{49 \cdot 5}$$

$$9\sqrt{5} + 2\sqrt{5} - 7\sqrt{5}$$

$$\boxed{4\sqrt{5}}$$

6) $\sqrt{\frac{1}{5}} - \sqrt{5}$

$$\frac{\sqrt{1} \cdot \sqrt{5}}{\sqrt{5} \sqrt{5}} - \sqrt{5}$$

$$\sqrt{5} - \sqrt{5 \cdot 5}$$

$$\frac{5}{\sqrt{5}} - \frac{5\sqrt{5}}{5} = \frac{4\sqrt{5}}{5}$$

$$3\sqrt{\frac{7}{4}} - 10\sqrt{\frac{1}{7}} + 3\sqrt{28}$$

$$\frac{3\sqrt{7}}{2} - \frac{10\sqrt{1}}{\sqrt{7}} + 3\sqrt{4 \cdot 7}$$

$$\frac{3\sqrt{7}}{2} - \frac{10\sqrt{7}}{7} + \frac{6\sqrt{7}}{1}$$

$$\frac{21\sqrt{7}}{14} - \frac{20\sqrt{7}}{14} + \frac{84\sqrt{7}}{14}$$

$$= \frac{85\sqrt{7}}{14}$$

$$8) \quad 2\sqrt{3} \cdot 4\sqrt{6} = 24\sqrt{2}$$

$$8\sqrt{18}$$

$$8^3\sqrt{9 \cdot 2}$$

$$24\sqrt{2}$$

$$9) \quad 4\sqrt{2}(3\sqrt{2} + 2\sqrt{6}) =$$

$$24 + 8\sqrt{12}$$

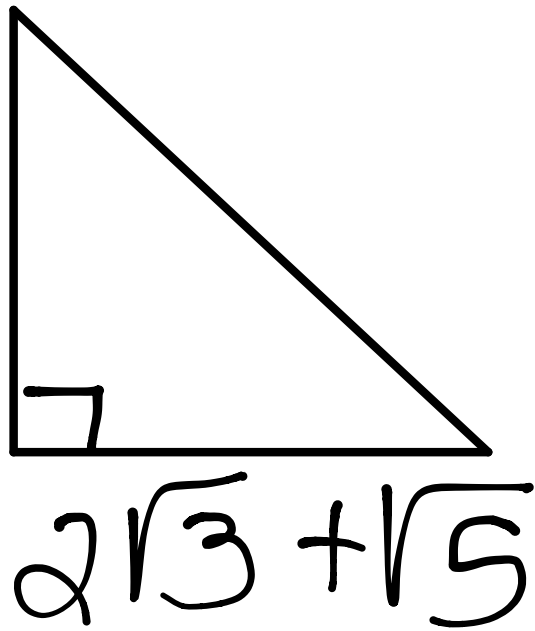
$$24 + 16\sqrt{3}$$

$$24 + 16\sqrt{3}$$

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$$4\sqrt{3} + \sqrt{5}$$



$$A = \frac{bh}{2}$$

$$A = \frac{(2\sqrt{3} + \sqrt{5})(4\sqrt{3} + \sqrt{5})}{2}$$

$$A = 24 + 2\sqrt{15} + 4\sqrt{15} + 5$$

$$A = \frac{29 + 6\sqrt{15}}{2}$$

Assignment

Q. 637-639
(2-32E, 44-48E)

$$31) \sqrt{\frac{2}{3}} \cdot \sqrt{\frac{5}{2}}$$

$$\sqrt{\frac{\cancel{2}}{3} \cdot \frac{5}{\cancel{2}}} = \sqrt{\frac{5}{3}} = \frac{\sqrt{5}}{\sqrt{3}}$$

$$\frac{\sqrt{5}}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{15}}{3}$$

$\sqrt{3}$ $\sqrt{3}$ $\sqrt{3}$

$$43) \frac{\sqrt{3a^3b^4}}{\sqrt{8ab^6}} = \sqrt{\frac{3a^3b^4}{8ab^6}}$$

$$\sqrt{\frac{3a^2}{8b^2}} = \frac{\sqrt{3a^2}}{\sqrt{8b^2}} = \frac{a\sqrt{3}}{2b\sqrt{2}}$$

$$\frac{a\sqrt{3}}{2b\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{a\sqrt{6}}{4b}$$

$$47 \quad \frac{11}{\sqrt{2+5}} \cdot \frac{\sqrt{2-5}}{\sqrt{2-5}}$$

$$11\sqrt{2} - 55$$

$$2 - 25$$

$$11\sqrt{2} - 55$$

$$-23$$

$$-11\sqrt{2} + 55$$

$$23$$

35)

$$\sqrt{\frac{a}{3}}$$

$$\frac{\sqrt{a}}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3a}}{3}$$