

## Answers to HW 6.7 (ID: 1)

1)  $2p^2\sqrt{2}$

5)  $3\sqrt{3}$

9)  $-12\sqrt{10}$

13)  $\frac{1}{2}$

2)  $3x\sqrt{7x}$

6)  $-7\sqrt{6}$

10)  $12k\sqrt{k}$

14)  $\frac{5}{6}$

3)  $-15x\sqrt{2y}$

7)  $10\sqrt{5} - 2\sqrt{2}$

11)  $4\sqrt{3} + 3$

15)  $\sqrt{2}$

4)  $4x^3y^2\sqrt{3x}$

8)  $4\sqrt{6}$

12)  $3\sqrt{2} + 4\sqrt{3}$

16)  $\frac{5\sqrt{6}}{4}$

①  $\sqrt{8p^4}$

$\sqrt{8}$        $\sqrt{p^4}$

$\sqrt{4 \cdot 2}$

$\sqrt{4} \sqrt{2}$

$2\sqrt{2}$

$p^2$

$2p^2\sqrt{2}$

②  $\sqrt{63x^3}$

$\sqrt{63}$        $\sqrt{x^3}$

$\sqrt{9 \cdot 7}$        $\sqrt{x^2 \cdot x^1}$

$\sqrt{9} \sqrt{7}$        $\sqrt{x^2} \sqrt{x}$

$3\sqrt{7}$        $x^1 \sqrt{x}$

$3x\sqrt{7x}$

(3)  $-5\sqrt{18x^2y}$

$\sqrt{18}$     $\sqrt{x^2}$     $\sqrt{y}$

$\sqrt{9}$     $\sqrt{2}$     $\sqrt{y}$

$3\sqrt{2}$     $x$     $\sqrt{y}$

$\therefore -5 \cdot 3x\sqrt{2y}$

$-15x\sqrt{2y}$

④  $2\sqrt{12x^7y^4}$

$\downarrow$   $\sqrt{4}\sqrt{3}\sqrt{x^4}\sqrt{x}y^2$

$2 \cdot 2\sqrt{3}x^3\sqrt{x}y^2$

$4x^3y^2\sqrt{3x}$

⑤

$$3\sqrt{12} - 3\sqrt{3}$$

$$\downarrow \sqrt{4}\sqrt{3}$$

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

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

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

$$\begin{aligned} \textcircled{6} \quad & -3\sqrt{54} + 2\sqrt{6} \\ & \begin{array}{c} \wedge \\ \sqrt{9} \quad \sqrt{6} \\ -3 \cdot 3\sqrt{6} \quad \downarrow \\ -9\sqrt{6} + 2\sqrt{6} \\ \boxed{-7\sqrt{6}} \end{array} \end{aligned}$$



$$\begin{aligned} \textcircled{8} \quad & 2\sqrt{24} + 3\sqrt{6} - \sqrt{54} \\ & 2\sqrt{4}\sqrt{6} + 3\sqrt{6} - \sqrt{9}\sqrt{6} \\ & 2 \cdot 2\sqrt{6} + 3\sqrt{6} - 3\sqrt{6} \\ & 4\sqrt{6} + \cancel{3\sqrt{6}} - \cancel{3\sqrt{6}} \\ & \boxed{4\sqrt{6}} \end{aligned}$$



$$\textcircled{a} \quad 3\sqrt{5} \cdot -4\sqrt{2}$$

$$\boxed{-12\sqrt{10}}$$

-

$$\textcircled{10} \quad -3\sqrt{2k} \cdot -\sqrt{8k^2}$$

$$3\sqrt{16k^3}$$

$$3 \cdot 4 \cdot \sqrt{k^3}$$

$$\sqrt{k^2} \sqrt{k}$$
$$\boxed{12k\sqrt{k}}$$

$$\textcircled{11} \quad \sqrt{3}(4 + \sqrt{3})$$

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

$$\textcircled{12} \quad \sqrt{3}(\sqrt{6} + 4)$$

$$\sqrt{18} + 4\sqrt{3}$$

^

$$\sqrt{9} \quad \sqrt{2}$$

$$3\sqrt{2} + 4\sqrt{3}$$

(14)

$$\frac{5\sqrt{20}}{4\sqrt{45}}$$

$$\frac{5\sqrt{4}}{4\sqrt{9}} = \frac{5 \cdot 2}{4 \cdot 3} = \frac{10}{12} = \frac{5}{6}$$

(15)

$$\frac{4\sqrt{5}}{2\sqrt{10}} = \sqrt{\frac{5}{10}}$$

$$\frac{2\sqrt{1}}{1\sqrt{2}} = \frac{2}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\cancel{2}\sqrt{2}}{\cancel{2}} = \sqrt{2}$$

(16)

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

$$= \frac{5\sqrt{6}}{2 \cdot 2}$$

$$= \boxed{\frac{5\sqrt{6}}{4}}$$

Rationalize the  
Denominator

$$\sqrt{5} \cdot \sqrt{5} = 5$$

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

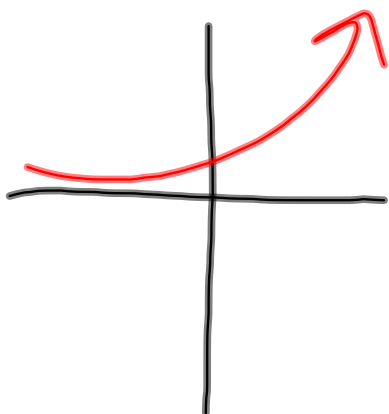
$$(\sqrt{x})^2 = x$$

**QUIZ!**

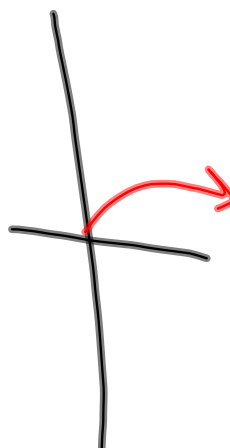
exponential functions

$$f(x) = 2^x$$

$$f(t) = 500(1 + .12)^t$$

Radical Functions

$$f(x) = \sqrt{x}$$



homework finish 6.8 packet

Unit 6 Test: Thursday 1/22

Q2 Exam: Tuesday 1/27

Good luck Pizza Party: Wed. 1/21



