

Bellwork Hon Alg 2 Monday, October 24, 2016

1. Simplify each.

a. $\sqrt{243}$

b. $\sqrt{252}$

c. $\sqrt{384}$

Factor each completely.

2. $24d^3 - 96d^2 - 54d$

3. $16w^2 - 25m^2$

4. $2g^3 + 5g^2 - 18g - 45$

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ANSWERS

1. Simplify each.

a. $\sqrt{243} = \sqrt{81 \cdot 3}$

$9\sqrt{3}$

b. $\sqrt{252} = \sqrt{36 \cdot 7}$

$6\sqrt{7}$

c. $\sqrt{384} = \sqrt{64 \cdot 6}$

$8\sqrt{6}$

Factor each completely.

2. $24d^3 - 96d^2 - 54d$
 $= 6d(4d^2 - 16d - 9)$
 $= 6d(2d+1)(2d-9)$

$\begin{array}{r} -36 \\ -18 \times 2 \\ -16 \end{array}$
 $2d - 9$

$4d$	$4d^2$	$-8d$
$+1$	$+2d$	-9

3. $16w^2 - 25m^2 \rightarrow$ difference of perfect squares
 $= (4w + 5m)(4w - 5m)$

4. $2g^3 + 5g^2 - 18g - 45$
 $= (2g+5)(g^2-9)$
 $\downarrow$
 $= (2g+5)(g+3)(g-3)$

$2g + 5$

g^2	$2g^3$	$+5g^2$
-9	$-18g$	-45