Alg1

May 2, 2012

Anything to correct?

c) $(5k-6)(8k+5)=0$

$5k-6=0$ | $8k+5=0$

$+6\ +6$ | $-5\ -5$

$\frac{5k}{5}=\frac{6}{5}$ | $\frac{8k}{8}=\frac{-5}{8}$

$k=\frac{6}{5}$ | $k=-\frac{5}{8}$

$k=\frac{6}{5}, -\frac{5}{8}$

5/2 - Simplifying Square Roots

What is a square root? What # times itself that gives you the # under the √

$\sqrt{9} = 3$

$\sqrt{9}$
$= 3$

$\sqrt{64} = 8$

$\sqrt{25} = 5$

$\sqrt{144} = 12$

$\sqrt{16} = 4$

$\sqrt{256} = 16$

How many "perfect squares" are there?

1, 4, 9, 16, 25, 36, 49, 64, 81,
100, 121, 144, 169, 196, 225, . . .

infinite!

There are other "regular" square roots that are in between the perfect squares...

$\sqrt{18}$ $\sqrt{24}$

$\sqrt{12}$ $\sqrt{50}$

Break the number into factors so that one is a perfect square and the other is not, then simplify.

$\sqrt{12}$

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

$= 2\sqrt{3}$

$\sqrt{18}$

$= \sqrt{9} \cdot \sqrt{2}$

$= 3\sqrt{2}$

$\sqrt{}$ part has to be last.

$$\sqrt{24}$$

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

$$= 2\sqrt{6}$$

$$\sqrt{50}$$

$$= \sqrt{25}\,\sqrt{2}$$

$$= 5\sqrt{2}$$

When the numbers get too big or when you can't find a perfect square, start using any small factors until it breaks down into something you recognize.

$\sqrt{128}$

$2 \cdot 64$

$= 8\sqrt{2}$

$5\overline{)245}$

49

20

45

-45

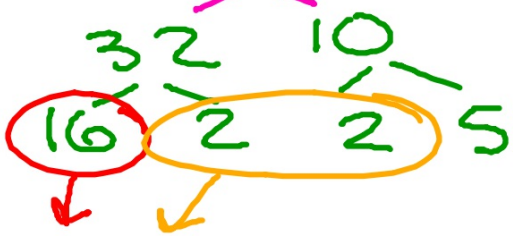
0

$\sqrt{245}$

$5 \cdot 49$

$= 7\sqrt{5}$

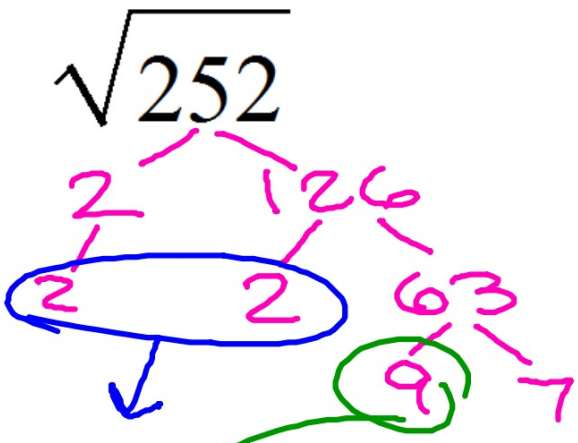
$\sqrt{320}$



$= 4 \cdot 2\sqrt{5}$

$= 8\sqrt{5}$

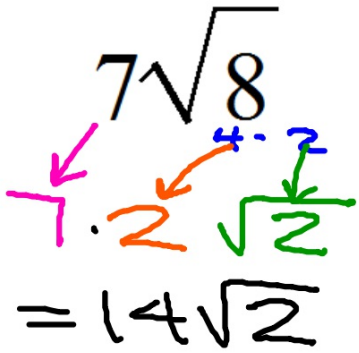
$\sqrt{252}$



$= 2 \cdot 3\sqrt{7}$

$= 6\sqrt{7}$

If there is a number in the front, just times simplify the square root then times both numbers out in front.



$$-3\sqrt{200}$$

$$= -3 \cdot 10\sqrt{2}$$

$$= -30\sqrt{2}$$

Homework

Lilac Miscellaneous WS3

Due #1-14 due Thursday
#1-30 due Friday