Bellwork Alg 2B Friday, September 22, 2017

Simplify each.

1. $(8-\sqrt{14})^2$

2. $(\sqrt{33}+5\sqrt{6})^2$

3. $(9+2\sqrt{5})(9-2\sqrt{5})$

4. $(4\sqrt{10}-\sqrt{3})(4\sqrt{10}+\sqrt{3})$

5. A bakery uses a special flour mixture that contains corn, wheat, and rye in the ratio $3:5:2$. If a bag of the mixture contains 5 pounds of rye how many pounds of wheat does it contain?

A. 2 B. 5 C. 7.5 D. 10 E. 12.5

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ANSWERS

Simplify each.

1. $(8-\sqrt{14})^2$

$= 78 - 16\sqrt{14}$

	8	$-\sqrt{14}$
8	64	$-8\sqrt{14}$
$-\sqrt{14}$	$-8\sqrt{14}$	$+14$

2. $(\sqrt{33}+5\sqrt{6})^2$

$= 183 + 10\sqrt{198}$ (9.22)

$= 183 + 10.3\sqrt{22}$

$= 183 + 30\sqrt{22}$

	$\sqrt{33}$	$+5\sqrt{6}$
$\sqrt{33}$	33	$5\sqrt{198}$
$+5\sqrt{6}$	$5\sqrt{198}$	25.6 150

3. $(9+2\sqrt{5})(9-2\sqrt{5})$

$a^2 - b^2 = (9)^2 - (2\sqrt{5})^2 = 81 - 4.5$

$= 81 - 20$

$= 61$

4. $(4\sqrt{10}-\sqrt{3})(4\sqrt{10}+\sqrt{3})$

$a^2 - b^2 = (4\sqrt{10})^2 - (\sqrt{3})^2$

$= 16 \cdot 10 - 3$

$= 160 - 3 = 157$

5. A bakery uses a special flour mixture that contains corn, wheat, and rye in the ratio 3 : 5 : 2. If a bag of the mixture contains 5 pounds of rye how many pounds of wheat does it contain?

A. 2 B. 5 C. 7.5 D. 10 E. 12.5

corn : wheat : rye

$3 : 5 : 2$

$\frac{5 \text{ wheat}}{2 \text{ rye}} = \frac{X \text{ lb wheat}}{5 \text{ lb rye}}$

$X = 12.5$ lbs wheat