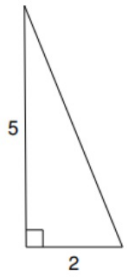
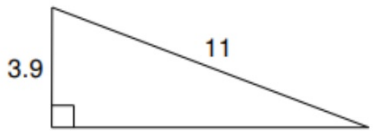
Find the missing side length.

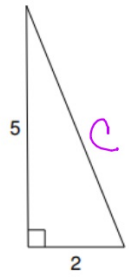




Could the given lengths be the sides of a right triangle?

$$a = 6.4,\ b = 12,\ c = 12.2$$

Find the missing side length.



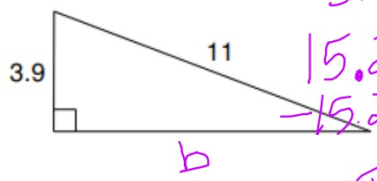
$a^2 + b^2 = c^2$

$2^2 + 5^2 = c^2$

$4 + 25 = c^2$

$\sqrt{29} = c^2$

$c = 5.39$



$3.9^2 + b^2 = 11^2$

$15.21 + b^2 = 121$

$-15.21 \quad -15.2$

$\sqrt{b^2} = 105.79$

$b \approx 10.29$

Could the given lengths be the sides of a right triangle?

$a = 6.4,\ b = 12,\ c = 12.2$

NO

$6.4^2 + 12^2 = 12.2^2$

$40.96 + 144 = 148.84$

$188.96 \neq 148.84$

Simplify each expression.

$3\sqrt{5} - \sqrt{5}$

$\sqrt{162}$

$\sqrt{64g^2}$

Simplify each expression.

$3\sqrt{5} - 1\sqrt{5}$

$2\sqrt{5}$

$\sqrt{162}$

$\sqrt{81}\sqrt{2}$

$9\sqrt{2}$

$\sqrt{64g^2}$

$8g$

Simplify each expression.

$4\sqrt{5} - \sqrt{20}$

$\frac{8}{\sqrt{2}}$

Simplify each expression.

$$4\sqrt{5} - \sqrt{20}$$

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

$4\sqrt{5} - 2\sqrt{5}$

$2\sqrt{5}$

$$\frac{8}{\sqrt{2}} \quad \frac{\sqrt{2}}{\sqrt{2}}$$

$\frac{8\sqrt{2}}{\sqrt{4}}$

$\frac{8\sqrt{2}}{2} = 4\sqrt{2}$

Simplify each expression.

A $\sqrt{10}(\sqrt{6}+3)$

B $(\sqrt{6}-2\sqrt{3})(\sqrt{6}+\sqrt{3})$

Simplify each expression.

A $\sqrt{10}(\sqrt{6} + 3)$

$\sqrt{60} + 3\sqrt{10}$

$\sqrt{4}\sqrt{15} + 3\sqrt{10}$

$2\sqrt{15} + 3\sqrt{10}$

B $(\sqrt{6} - 2\sqrt{3})(\sqrt{6} + \sqrt{3})$

	$\sqrt{6}$	$-2\sqrt{3}$
$\sqrt{6}$	$\sqrt{36} = 6$	$-2\sqrt{18}$
$+\sqrt{3}$	$\sqrt{18}$	$-2\sqrt{9}$
	$\sqrt{9}\sqrt{2}$	$-2 \cdot 3$
	$3\sqrt{2}$	-6

$-2\sqrt{9}\sqrt{2} = -2 \cdot 3\sqrt{2} = -6\sqrt{2}$

$-3\sqrt{2}$

Solve & check your answer!

$\sqrt{x-3} = \sqrt{x+5}$

$\sqrt{2x-1} = x$

Solve & check your answer!

$$\sqrt{x-3}^2 = \sqrt{x+5}^2$$

$x - 3 = x + 5$

$-x \quad -x$

$-3 \neq 5$

NO Solution!

$$\sqrt{2x-1}^2 = x^2$$

$2x - 1 = x^2$

$x^2 - 2x + 1 = 0$

$(x-1)(x-1) = 0$

$x = 1$

$\sqrt{2(1)-1} = 1$

$\sqrt{1} = 1$

Yes!