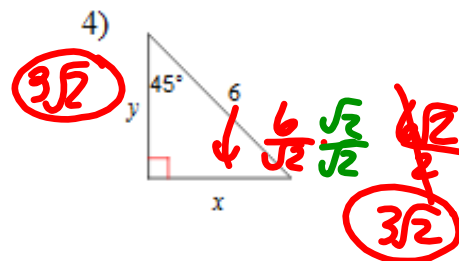
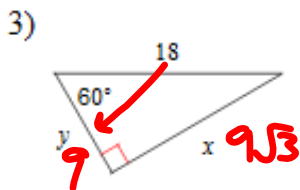
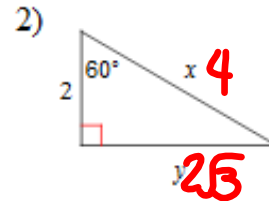
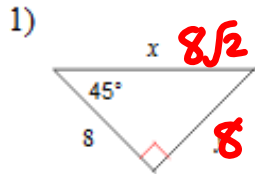


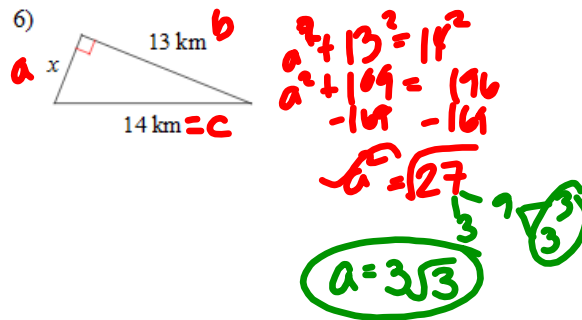
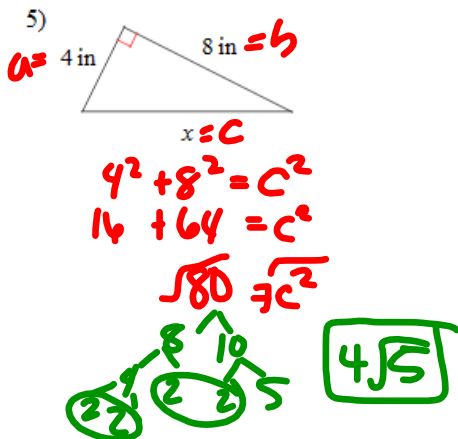
answers at end,
SHOW WORK

Test 5 Practice Part 1 RIGHT TRIANGLES

SPECIAL TRIANGLES: Find the missing side lengths. NO CALCULATOR

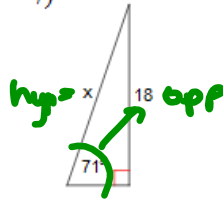


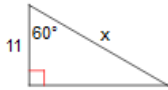
PYTHAGOREAN THEOREM: Find the missing side of each triangle. Leave your answers in simplest radical form. (NO DECIMALS)

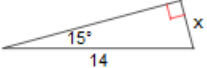


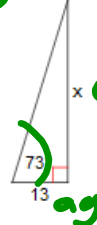
TRIG: SOH CAH TOA: Find the missing side. Round to the nearest tenth.

→ one decimal.

7)  $x \cdot \sin 71 = \frac{18}{\sin 71}$
 $x = \frac{18}{\sin 71}$
 $x = 19.037$
 $x = 19.0$

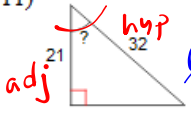
8) 

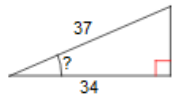
9) 

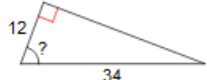
10)  $\tan 73 = \frac{x}{13}$
 $42.5 = x$

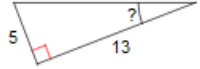
TRIG: SOH CAH TOA: Find the measure of the indicated angle to the nearest degree.

→ inverse!

11)  $\cos \theta = \frac{21}{32}$
 $\theta = 48.9955$
 $\theta = 49$

12)  $\theta = 23$

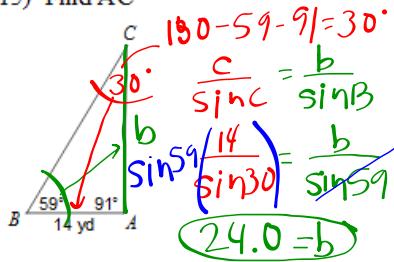
13)  $\theta = 69$

14)  $\theta = 21$

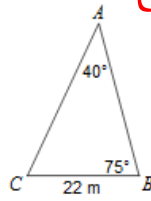
Find each measurement indicated. Round your answers to the nearest tenth.

LAW OF SINES: $a/\sin A = b/\sin B = c/\sin C$ COSINES: $a^2 = b^2 + c^2 - 2bc \cos A$

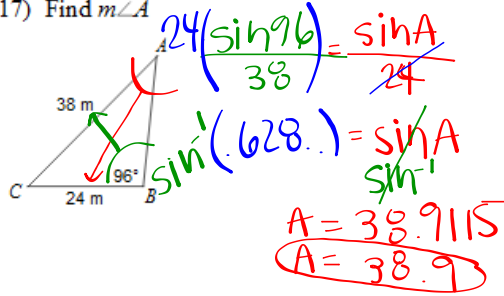
15) Find AC



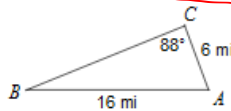
16) Find AC



17) Find $m\angle A$



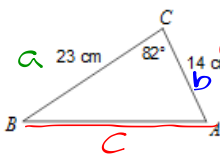
18) Find $m\angle B$



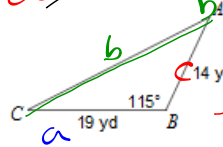
Start with the side you are trying to find:

Want c $\rightarrow c^2 = a^2 + b^2 - 2ab \cos C$
 Want b $\rightarrow b^2 = a^2 + c^2 - 2ac \cos B$
 Want a $\rightarrow a^2 = b^2 + c^2 - 2bc \cos A$

19) Find AB

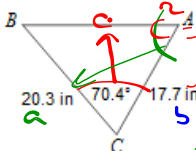


$a^2 = 23^2 + 14^2 - 2(23)(14) \cos 82$
 $a^2 = 635.373$
 $a = 25.2$



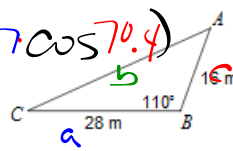
$b^2 = a^2 + c^2 - 2ac \cos B$
 $b^2 = 19^2 + 14^2 - 2(19)(14) \cos 115$
 $b^2 = 567 - (-224.833)$
 $b^2 = 791.833$
 $b = 27.96$
 $b = 28$

21) Find $m\angle A$



$c^2 = a^2 + b^2 - 2ab \cos C$
 $c^2 = 20.3^2 + 17.7^2 - 2(20.3)(17.7) \cos 70.4$
 $c^2 = 484.4$
 $c = 22$
 $20.3 \sin 70.4 = \frac{\sin A}{22}$
 $\sin^{-1}(0.86) = \sin A$
 $60.4 = A$

22) Find $m\angle C$



$b^2 = 28^2 + 16^2 - 2(28)(16) \cos 110$
 $b^2 = 1040 - (-306.45)$
 $b^2 = 1346.45$
 $b = 36.694$
 $16 \cdot \frac{\sin 110}{36.694} = \frac{\sin C}{28}$
 $\sin^{-1}(0.4097) = \sin C$
 $C = 24.1886$
 $C = 24.2$

Answers to Test 5 Practice Part 1 RIGHT TRIANGLES

1) $x = 8\sqrt{2}$, $y = 8$

5) $4\sqrt{5}$ in

9) 3.6

13) 69°

17) 38.9°

21) 60.3°

2) $x = 4$, $y = 2\sqrt{3}$

6) $3\sqrt{3}$ km

10) 42.5

14) 21°

18) 22°

22) 24.2°

3) $x = 9\sqrt{3}$, $y = 9$

7) 19.0

11) 49°

15) 24 yd

19) 25.2 cm

4) $x = 3\sqrt{2}$, $y = 3\sqrt{2}$

8) 22.0

12) 23°

16) 33.1 m

20) 28 yd