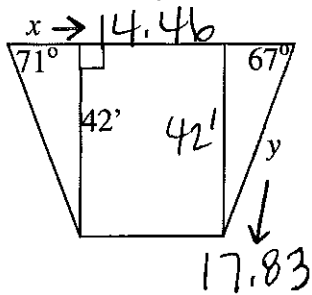


Trigonometry Test Review

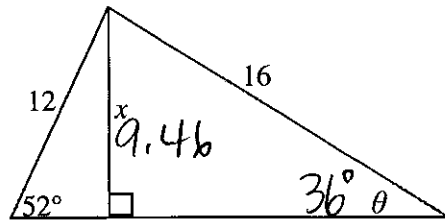
Key

Solve each problem. You will need to use your own paper. Please remember to round side lengths to the nearest hundredth and angles to the nearest degree.

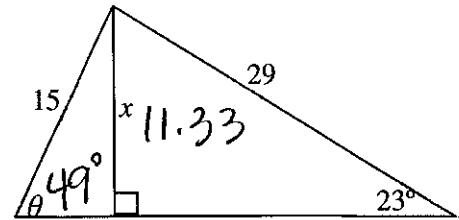
1. Find x and y



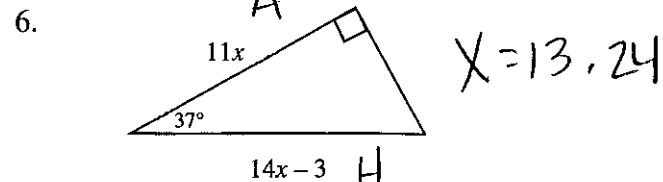
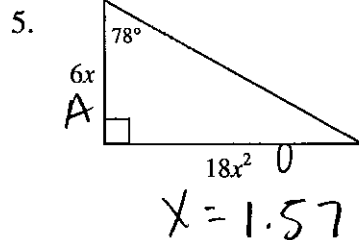
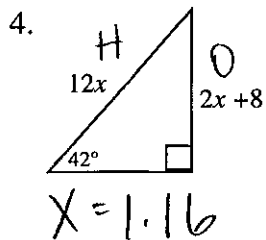
2.



3.



Solve for x .

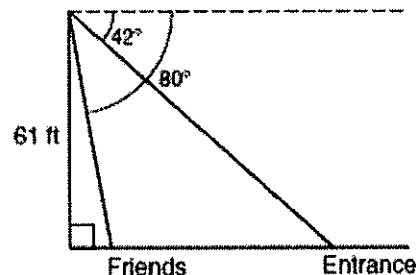


7. A tree casts a shadow of 28 m. The elevation of the sun is 49° . How tall is the tree?

32.2 m

8. Shane is 61 feet high on a ride at an amusement park. The angle of depression to the park entrance is 42° , and the angle of depression to his friends standing below is 80° . How far from the entrance are his friends standing?

~ 57 ft



9. A 30 foot tree broke from its base and fell against a house. If the tree hit the house 18 feet above the ground, what angle is the tree forming with the house?

53°

10. A freeway entrance ramp has an elevation of 15° . If the vertical lift is 22 feet, what is the distance along the ramp?

85.00 ft

11. Lauren is at the top of a 15 m lookout tower. From an angle of depression of 25° , she sees Evan coming toward her. How far is Evan from the base of the tower?

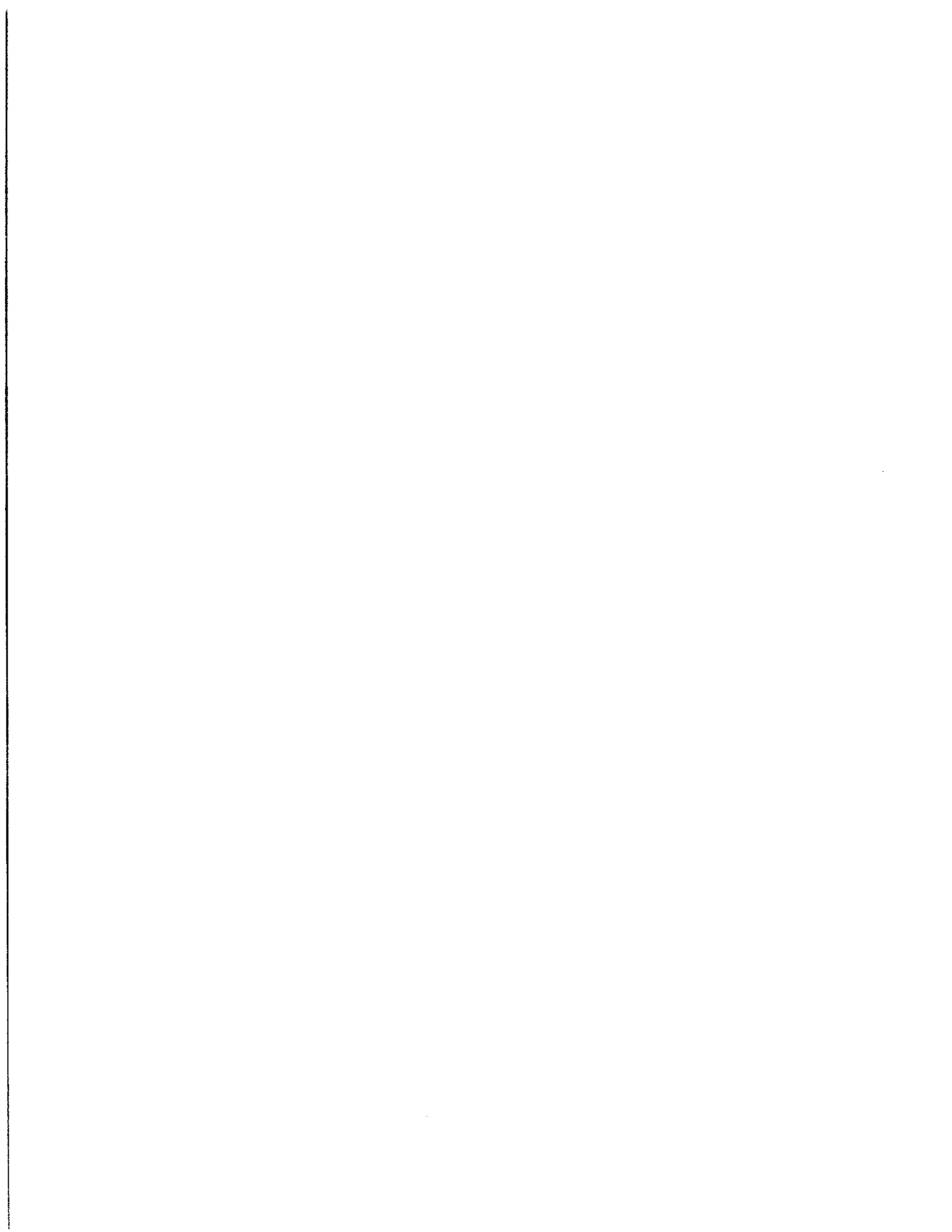
32.17 m

12. Rosalinda has a rocket that can travel 1500 feet before exploding. On the 4th of July, she lights the rocket at an elevation of 75° . How high will the rocket be when it explodes?

1448.89 feet

13. Mark has two sticks, 25 in. and 20 in. If he places them end to end perpendicularly, what two acute angles would be formed when he added the hypotenuse?

39° & 51°



#4-6 & 8 Challenge Questions

④ $\cos 42 = \frac{2x+8}{12x}$

$(12x) \cdot 743 = \frac{2x+8}{12x} (12x)$

$8.918x = 2x+8$
 $-2x \quad -2x$

$6.918x = 8$
 $\frac{6.918}{6.918} \quad \frac{8}{6.918}$
 $X = 1.16$

⑥ $\cos 37 = \frac{11x}{14x-3}$

$(14x-3) \cdot 799 = \frac{11x}{14x-3} (14x-3)$

$11.181x - 2.396 = 11x$
 $-11.181x \quad -11.181x$

$-2.396 = -.181x$

$X = 13.24$

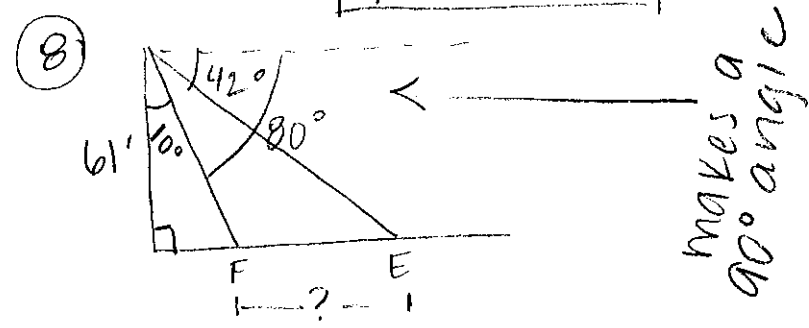
⑤ $\tan 78 = \frac{18x^2}{6x}$

$(6x) 4.705 = \frac{18x^2}{6x} (6x)$

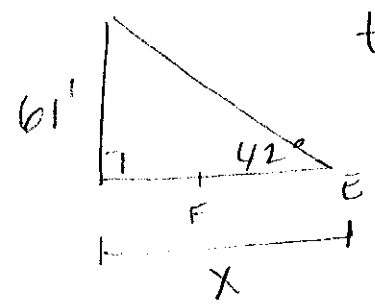
$28.228x = 18x^2$
 $\frac{28.228x}{x} \quad \frac{18x^2}{x}$

$28.228 = 18x$
 $\frac{28.228}{18} \quad \frac{18x}{18}$

$X = 1.57$



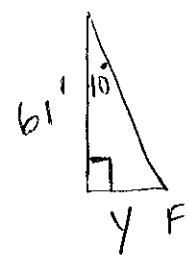
$\angle E = 42^\circ$



$\tan 42 = \frac{61}{x}$

$x = \frac{61}{\tan 42}$

$x = 67.75$



$\tan 10 = \frac{y}{61}$

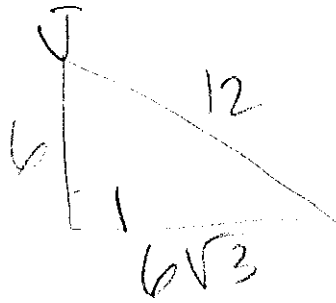
$61 \tan 10 = y$

$y = 10.76$

$x - y = ? \rightarrow 67.75 - 10.76 = 57$

$$\tan 71 = \frac{41}{x}$$

$$\sin 52 = \frac{x}{12}$$

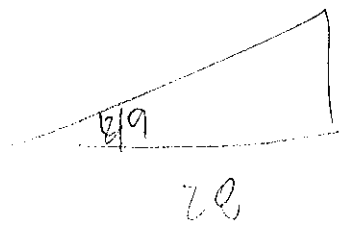


$$\tan = \frac{c}{A}$$

$$\frac{A}{0}$$

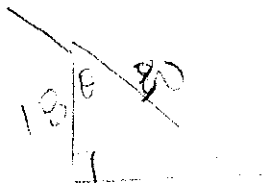
$$\frac{4}{6\sqrt{3}}$$

$$\frac{1}{\sqrt{3}}$$

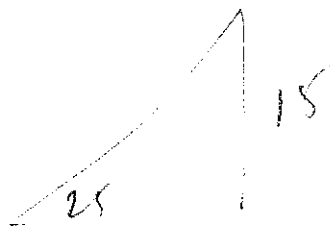


$$y = 31.2$$

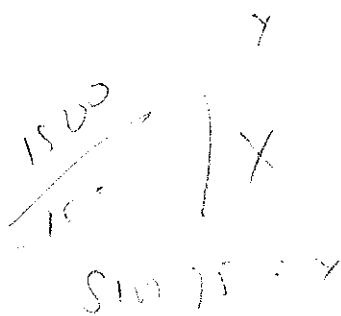
$$\tan 49 = \frac{x}{20}$$



$$\sin 15 = \frac{22}{x}$$



$$\tan 25 = \frac{15}{x}$$



$$\sin 75 = y$$



$$\tan$$