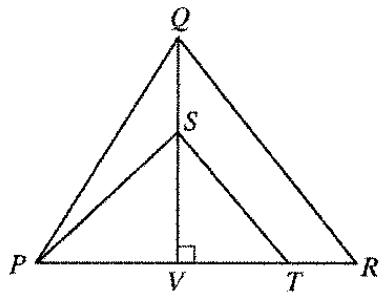
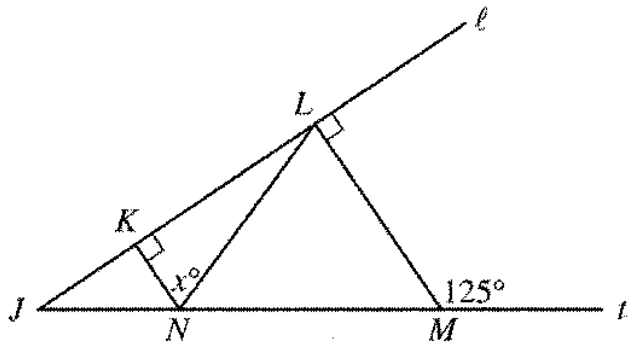


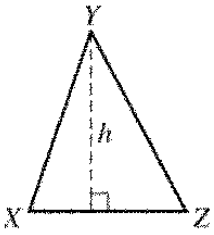

Note: Figure not drawn to scale.

In $\triangle PQR$ above, $\frac{QS}{QV} = \frac{1}{3}$ and $\frac{PT}{PR} = \frac{3}{4}$.

What is the value of the fraction $\frac{\text{area } \triangle PST}{\text{area } \triangle PQR}$?




In the figure above, $\overline{KN} \perp \overline{JL}$ and $\overline{LM} \perp \overline{JL}$. If the lengths of $\overline{LN}$ and $\overline{LM}$ are equal, what is the value of $x$?




In $\triangle XYZ$ above, $XZ$ is $\frac{6}{7}$ of $h$, the length of the altitude. What is the area of $\triangle XYZ$ in terms of $h$ ?

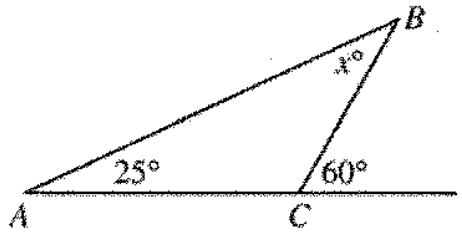
(A) $\frac{h^2}{3}$

(B) $\frac{3h^2}{7}$

(C) $\frac{3h}{7}$

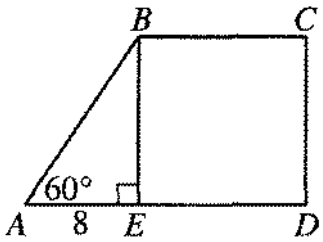
(D) $\frac{6h^2}{7}$

(E) $\frac{12h^2}{7}$




In $\triangle ABC$ above, what is the value of $x$ ?

(A) 25
(B) 30
(C) 35
(D) 40
(E) 60




In the figure above, $EBCD$ is a square and $AE = 8$. What is the area of $EBCD$ ?

The perimeter of equilateral triangle $ABC$ is 3 times the perimeter of equilateral triangle $DEF$. If the perimeter of $\triangle DEF$ is 10, what is the length of one side of $\triangle ABC$ ?

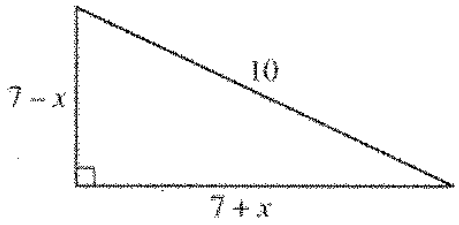
(A) $3\frac{1}{3}$

(B) 10

(C) 15

(D) 30

(E) 40




Note: Figure not drawn to scale.

The figure above is a right triangle. What is the value of $49 + x^2$ ?

(A) 50
(B) 51
(C) 72
(D) 98
(E) 100

Answers:

½

X=70°

(B) $\frac{3h^2}{7}$

(C) 35

Area=192

(B) 10

(A) 50