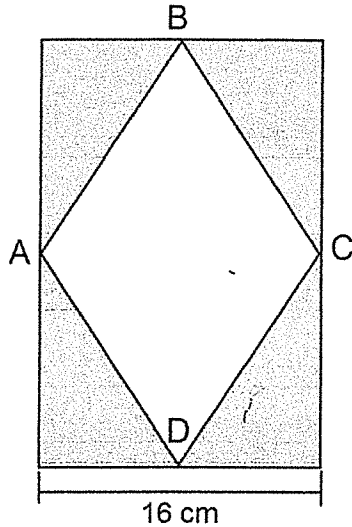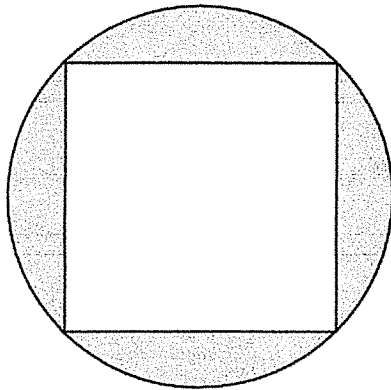4. Find the probability that a randomly chosen point in the rectangle lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. Sides of Rhombus ABCD are 17 cm.

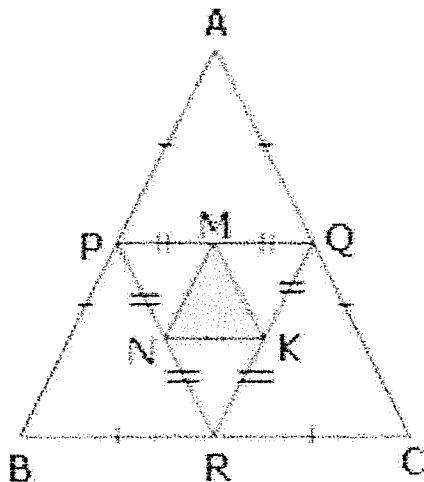5. A square is inscribed in a circle. Find the probability that a randomly chosen point in the circle lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. Radius of the circle is 9 in.
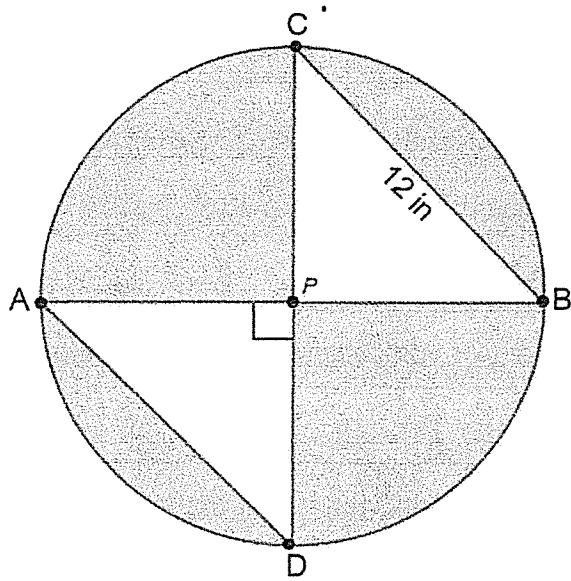

6. A dart is thrown at ΔABC. What is the probability that it lands on shaded portion ΔMNK? Give answer as a fraction.

7. A dart is thrown at circle P. What is the probability that it lands on shaded portion? Give answer as a percent rounded to a tenth. $\overline{AB}$ and $\overline{CD}$ are diameters.
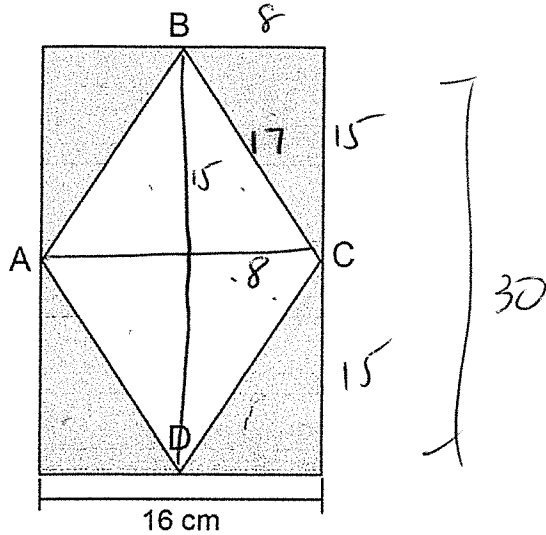

8. The bases of Isosceles Trapezoid ABCD are 15in and 23 in. Find the probability that a randomly chosen point in the trapezoid lies in the shaded region. Give answer as a percent rounded to the nearest hundredth.

4. Find the probability that a randomly chosen point in the rectangle lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. Sides of Rhombus ABCD are 17 cm.
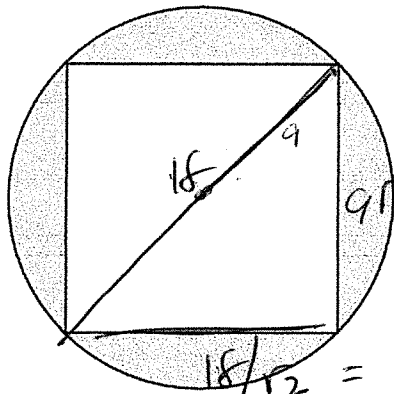
B   8

17   15

15

A _____ C

.8

15   30

15

D
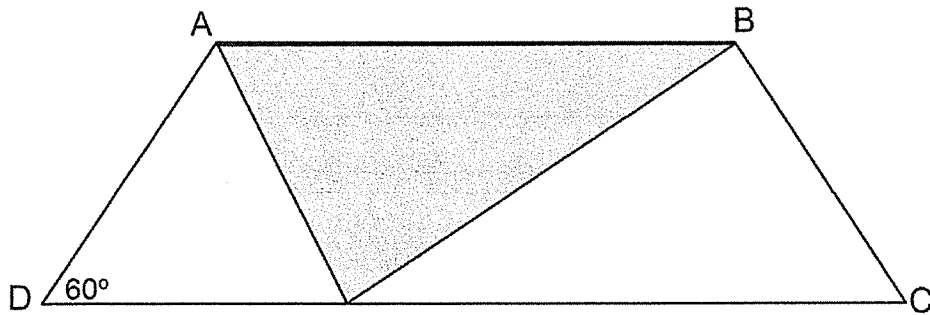
16 cm

Rect   480

4 corner △'s = $4\left(\frac{1}{2}\right)(8)(15)$

240

50%

5. A square is inscribed in a circle. Find the probability that a randomly chosen point in the circle lies in the shaded region. Give answer as a percent rounded to the nearest hundredth. Radius of the circle is 9 in.
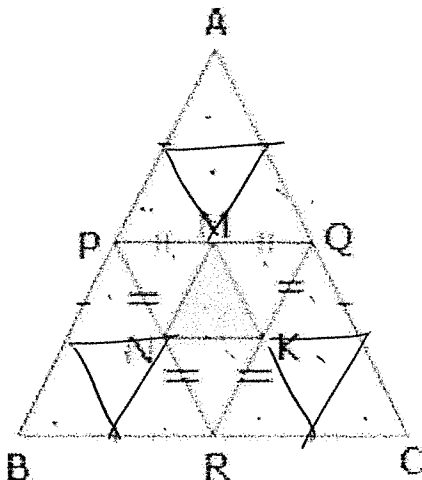
$\dfrac{circle - sq}{circle} = \dfrac{81\pi - 162}{81\pi}$

18   9

$9\sqrt{2}$ circle $\pi(9)^2$

sq $(9\sqrt{2})(9\sqrt{2}) = 81 \cdot 2 = 162$

$\dfrac{18\sqrt{2}}{2} = \dfrac{18\sqrt{2}}{2} = 9\sqrt{2}$

36.34%

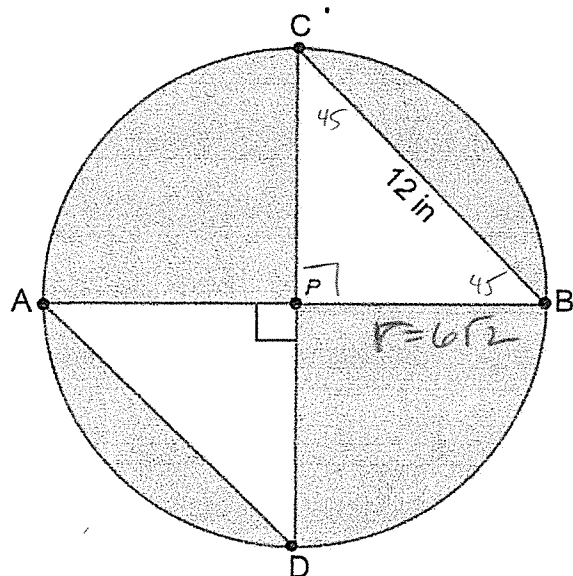**6.** A dart is thrown at △ABC. What is the probability that it lands on shaded portion △MNK? Give answer as a fraction.

A

P   M   Q

N   K

B   R   C

$\dfrac{1}{16}$

2

7. A dart is thrown at circle P. What is the probability that it lands on shaded portion? Give answer as a percent rounded to a tenth. $\overline{AB}$ and $\overline{CD}$ are diameters.
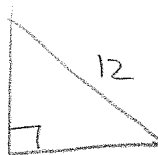
$$\frac{circle - 2\triangle's}{circle} = \frac{72\pi - 72}{72\pi} = 68.2$$

area of circle $\pi(6\sqrt{2})^2 = 72\pi$

Area 2 $\triangle$'s $= 2(\frac{1}{2})(6\sqrt{2})(6\sqrt{2}) = 7.$

$\boxed{68.2\%}$

C
45
12 in
A
P
45
B
r=6√2

D

12
$\frac{12}{\sqrt{2}} = \frac{12\sqrt{2}}{2} = 6\sqrt{2}$

8. The bases of Isosceles Trapezoid ABCD are 15in and 23 in. Find the probability that a randomly chosen point in the trapezoid lies in the shaded region. Give answer as a percent rounded to the nearest hundredth.

$15 = b$ $= b_1$

A
30°
$4\sqrt{3} = h$
LL = 4√3
B
D 60°
4
SL
15
C
23
$= b_2$
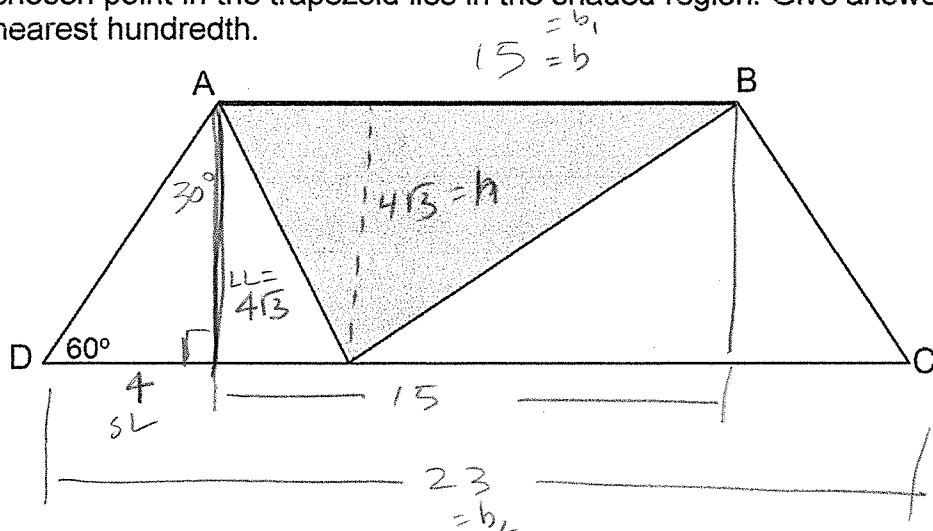
$$\frac{Area\ of\ \triangle}{Area\ of\ Trapezoid} = \frac{\frac{1}{2}(15)(4\sqrt{3})}{\frac{1}{2}(15+23)(4\sqrt{3})} = \frac{15}{15+23}$$

$=$

$\boxed{39.47\%}$