28 **Quadrilateral *ABCD* is a parallelogram. If adjacent angles are congruent, which statement must be true?**

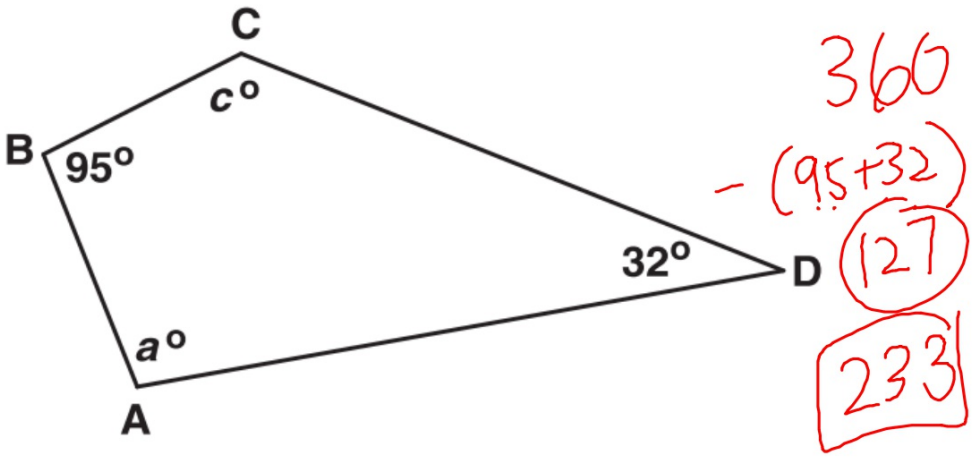
A Quadrilateral *ABCD* is a square.

B Quadrilateral *ABCD* is a rhombus.

C Quadrilateral *ABCD* is a rectangle.

D Quadrilateral *ABCD* is an isosceles trapezoid.

29 **For the quadrilateral shown below, what is $m\angle a + m\angle c$?**



360
- (95+32)
127
233

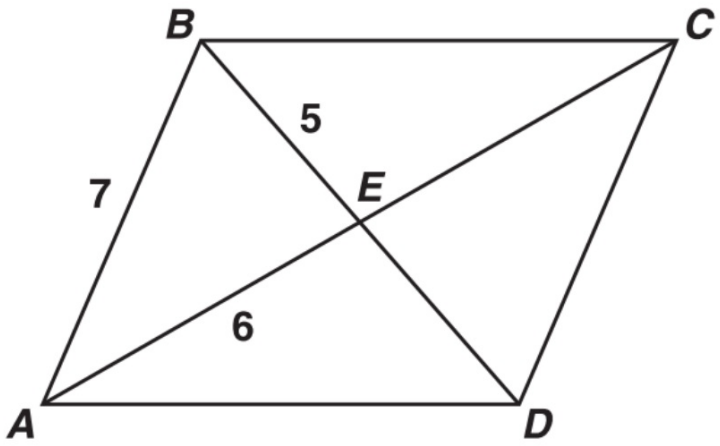
A 53°

B 137°

C 180°

D 233°

30 If *ABCD* is a parallelogram, what is the length of segment *BD*?



A 10

B 11

C 12

D 14

31 **The diameter of a circle is 12 meters. If point *P* is in the same plane as the circle, and is 6 meters from the center of the circle, which *best* describes the location of point *P*?**

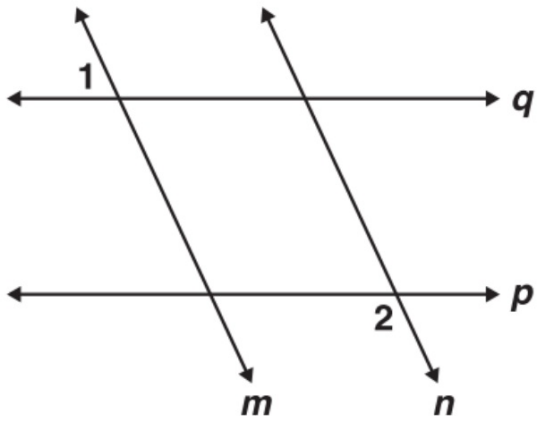
A Point *P* must be on the circle.

B Point *P* must be inside the circle.

C Point *P* may be either outside the circle or on the circle.

D Point *P* may be either inside the circle or on the circle.

32 **Given:** $p \parallel q$;
$m \parallel n$;
$m\angle 1 = 75°$



What is $m\angle 2$?

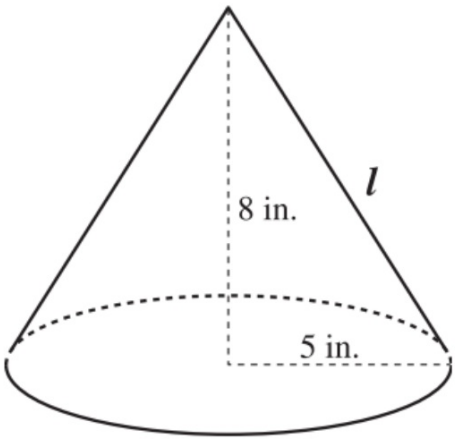
A 15°

B 75°

C 90°

D 105°

33 **A right circular cone has radius 5 inches and height 8 inches.**



What is the lateral area of the cone? (Lateral area of cone $= \pi rl$, where l = slant height)

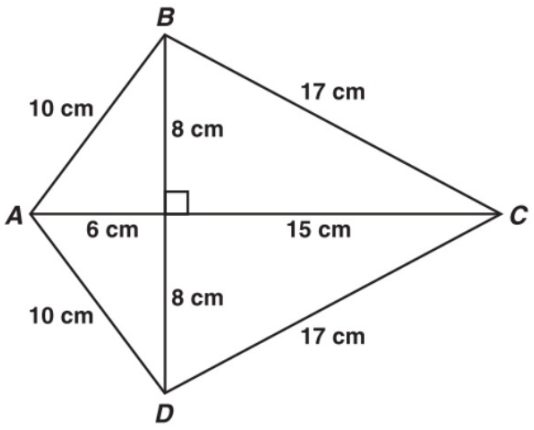
A 40π sq in.

B 445π sq in.

C $5\pi\sqrt{39}$ sq in.

D $5\pi\sqrt{89}$ sq in.

34 **Figure *ABCD* is a kite.**



What is the area of figure *ABCD*, in square centimeters?

A 120

B 154

C 168

D 336

35 **If a cylindrical barrel measures 22 inches in diameter, how many inches will it roll in 8 revolutions along a smooth surface?**

A 121π in.

B 168π in.

C 176π in.

D 228π in.

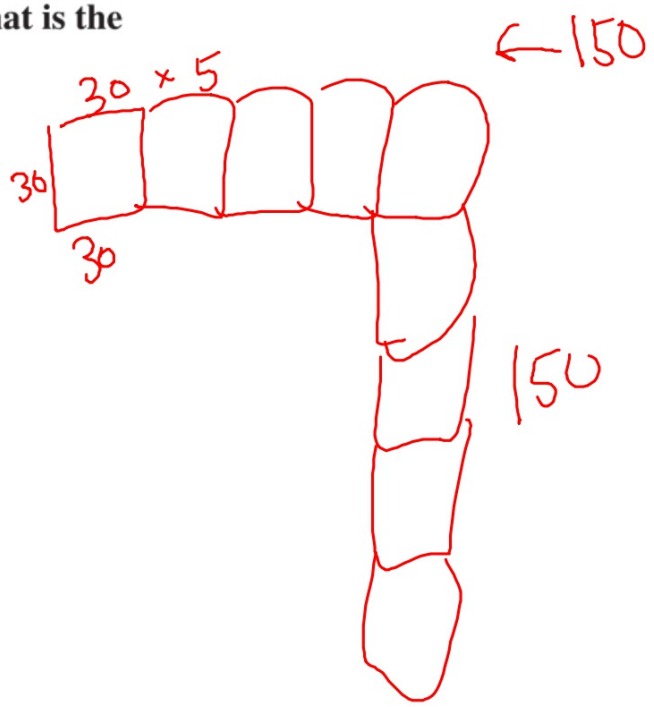
36 **A sewing club is making a quilt consisting of 25 squares with each side of the square measuring 30 centimeters. If the quilt has five rows and five columns, what is the perimeter of the quilt?**

A 150 cm

B 300 cm

C 600 cm

D 900 cm



37 **The minute hand of a clock is 5 inches long. What is the area of the circle, in square inches, created as the hand sweeps an hour?**

A 10π

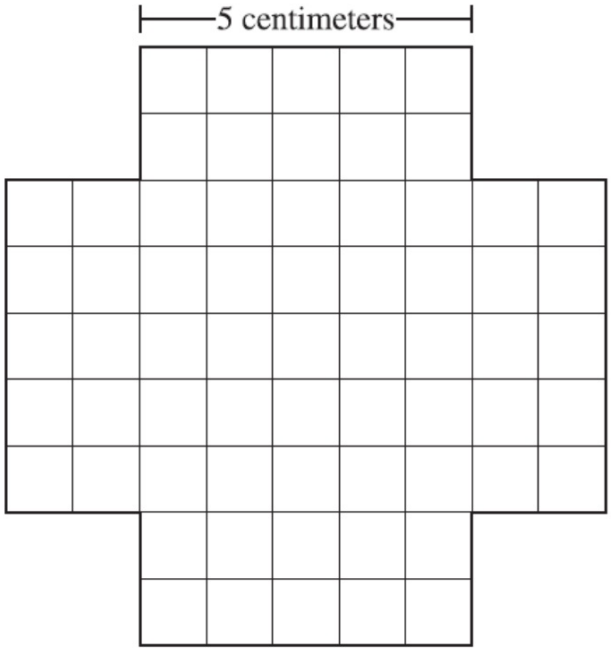
B 20π

C 25π

D 100π

CSG10223

38 **The four sides of this figure will be folded up and taped to make an open box.**



What will be the volume of the box?

A 50 cm^3

B 75 cm^3

C 100 cm^3

D 125 cm^3

39 A classroom globe has a diameter of 18 inches.

Which of the following is the approximate surface area, in square inches, of the globe?
(Surface Area $= 4\pi r^2$)

A 113.0
B 226.1
C 254.3
D 1017.4

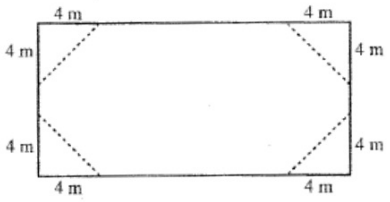
CSG20236

40 Vik is constructing a spherical model of Earth for his science fair project. His model has a radius of 24 inches. Since roughly 75% of Earth's surface is covered by water, he wanted to paint 75% of his model blue to illustrate this fact. Approximately how many square inches on his model will be painted blue?
(Surface Area $= 4\pi r^2$)

A 5426
B 7235
C 43,407
D 57,877

CSG11336

41 The rectangle shown below has length 20 meters and width 10 meters.

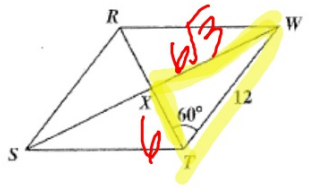


If four triangles are removed from the rectangle as shown, what will be the area of the remaining figure?

A 136 m²
B 144 m²
C 168 m²
D 184 m²

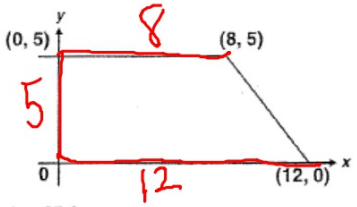
CSG09012

42 If $RSTW$ is a rhombus, what is the area of $\triangle WXT$?



A $18\sqrt{3}$
B $36\sqrt{3}$
C 36
D 48

43 What is the area, in square units, of the trapezoid shown below?



A 37.5

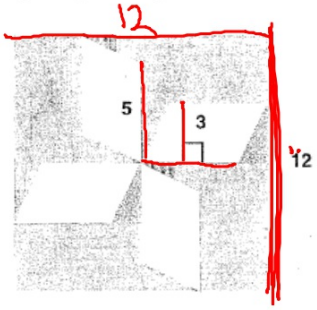
B 42.5

C 50

D 100

CSG30E26

44 The figure below is a square with four congruent parallelograms inside.



What is the area, in square units, of the shaded portion?

A 60

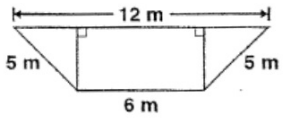
B 84

C 114

D 129

CSG30225

45 What is the area, in square meters (m), of the trapezoid shown below?



A 28

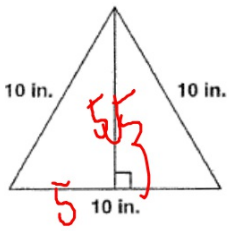
B 36

C 48

D 72

CSG10647

46 What is the area, in square inches (in.), of the triangle below?



A 25

B $25\sqrt{3}$

C 50

D $50\sqrt{3}$

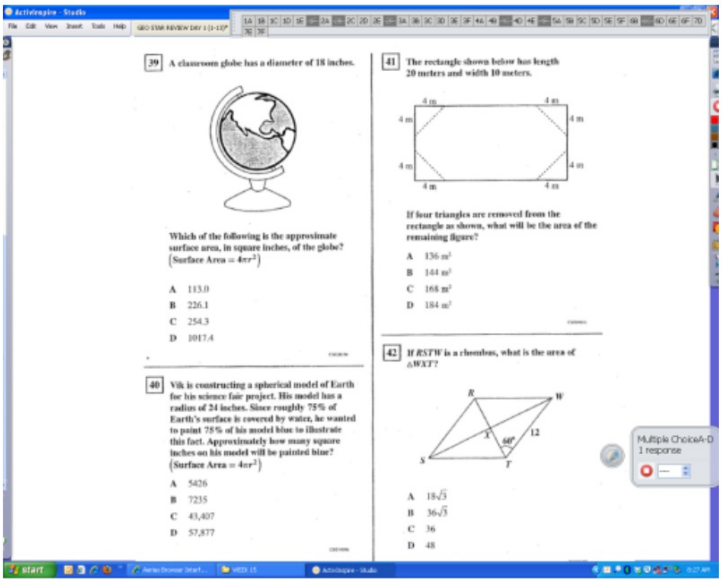
CSG10548

A Option 1

B Option 2

C Option 3

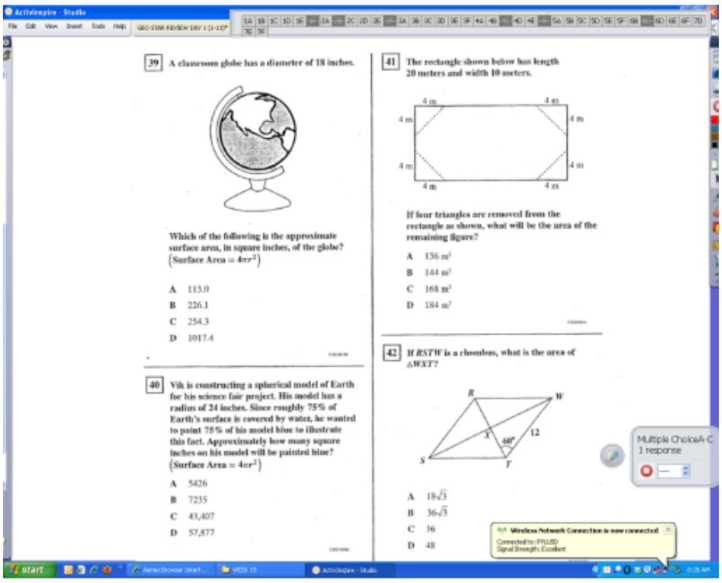
D Option 4



A Option 1

B Option 2

C Option 3

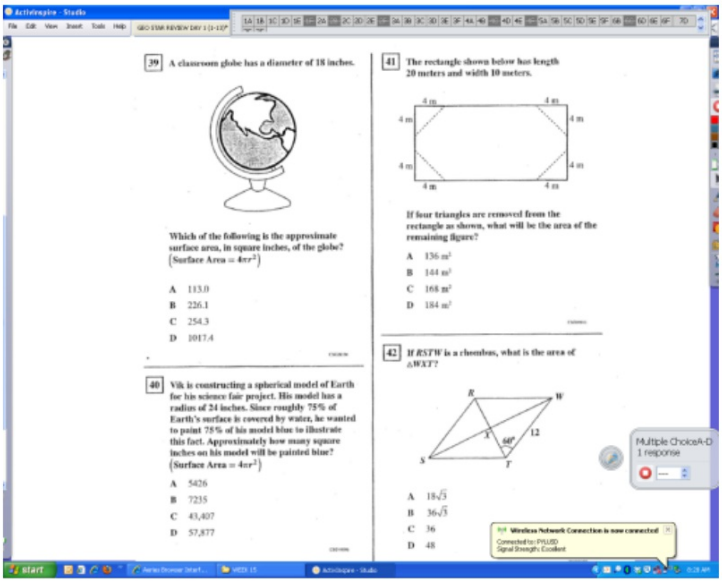


A Option 1

B Option 2

C Option 3

D Option 4



A Option 1

B Option 2

C Option 3

D Option 4