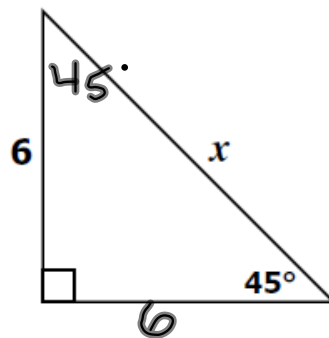


22



In the figure, what is the value of x ?

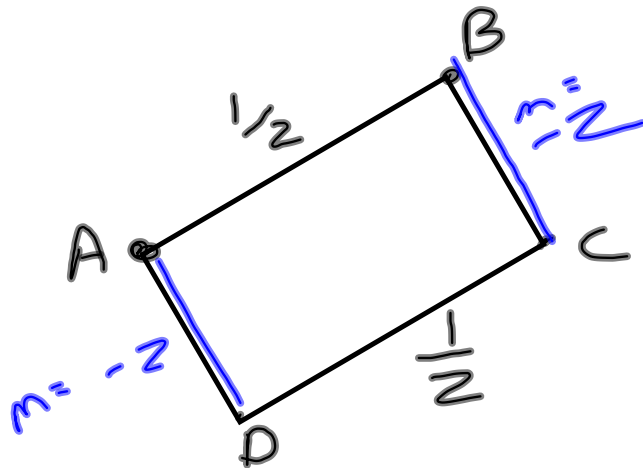
F 6

G $6\sqrt{2}$

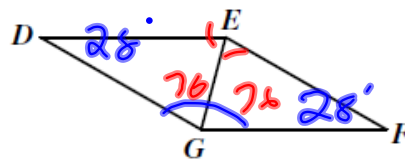
H $6\sqrt{3}$

J 12

29 In rectangle $ABCD$, the slope of \overline{AB} is $\frac{1}{2}$. What is the slope of \overline{CD} ?



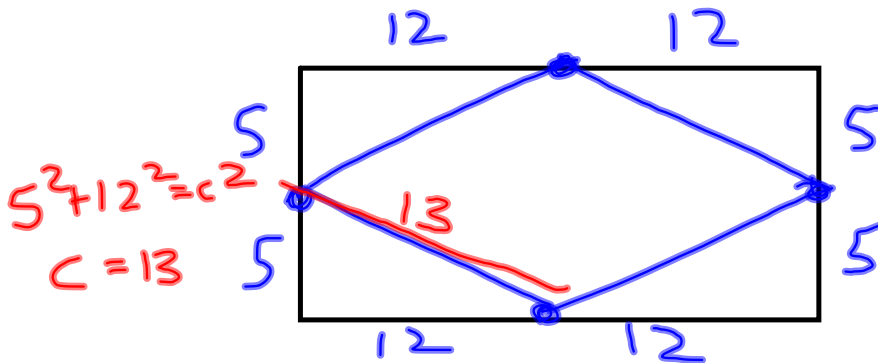
31 $DEFG$ is a rhombus with $m\angle EFG = 28^\circ$.



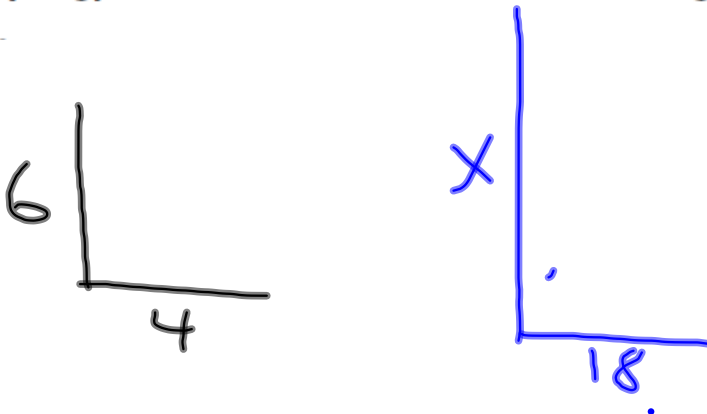
What is $m\angle GDE$?
 \overline{EGF}

$$\frac{152^\circ}{2}$$

- 33 A rectangular rug is 24 feet long and 10 feet wide. A rhombus design is formed inside the rug by joining the midpoints of each side of the rectangle. What is the length of each side of the rhombus?



- 34 A man who is 6 feet tall casts a shadow that is 4 feet long. At the same time, a nearby flagpole casts a shadow that is 18 feet long. How tall is the flagpole?



$$\frac{6}{x} = \frac{4}{18}$$

$$\frac{4x}{4} = \frac{108}{4}$$

$$x = 27$$

$$\frac{100}{4} \rightarrow 25 \quad + \quad \frac{2}{4} \rightarrow 0.5$$

39 A cone has a slant height of 10 centimeters and a lateral area of 60π square centimeters. What is the volume of a sphere with a radius equal to that of the cone?

- A $102\pi \text{ cm}^3$
- B $144\pi \text{ cm}^3$
- C $288\pi \text{ cm}^3$
- D $1,333\pi \text{ cm}^3$

Cone

$$L.A. = \pi \cdot r \cdot l$$

$$\downarrow$$

$$\frac{60\pi}{10\pi} = \frac{\pi \cdot r \cdot 10}{\pi \cdot 10}$$

$$6 = r$$

Sphere

$$V = \frac{4}{3} \pi r^3$$

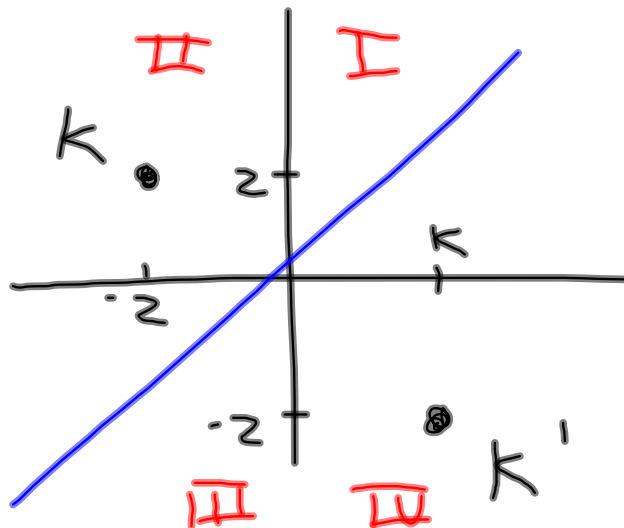
$$= \frac{4}{3} \pi \cdot 6^3$$

$$= 288\pi$$

40 Which line of reflection maps point K at $(-2, 2)$ to point K' at $(2, -2)$?

- F $y = 2$
- G $y = x$
- H x -axis
- J y -axis

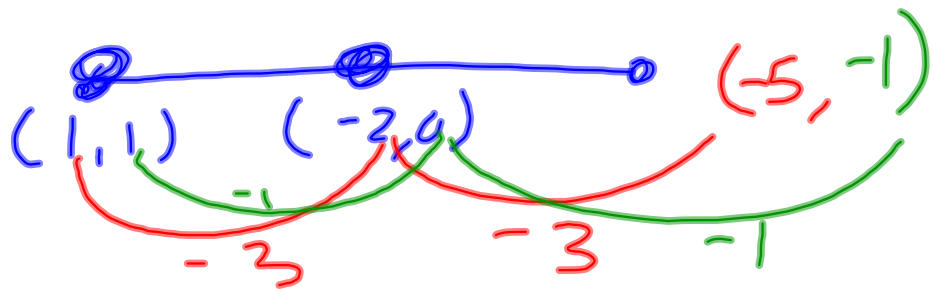
$(-2, 2)$ $(2, -2)$



C

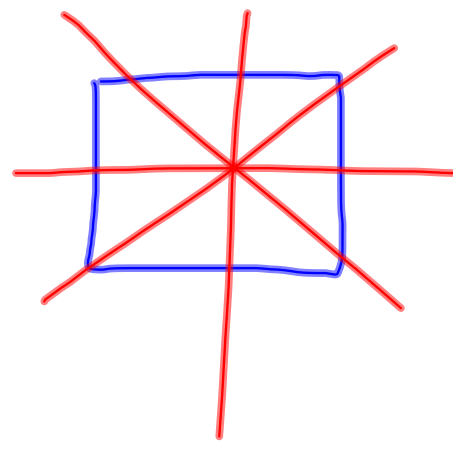
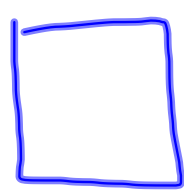
41 If the coordinates of A are $(1, 1)$ and the midpoint of \overline{AB} is $(-2, 0)$, then the coordinates of B are —

- A $(-0.5, 0.5)$
- B $(0.5, 0.5)$
- C $(-1, 0)$
- D $(-5, -1)$

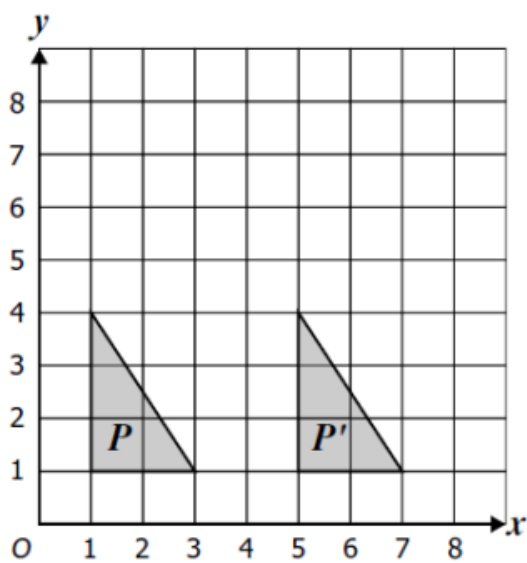


45 A regular quadrilateral has what type of symmetry?

- A Line symmetry only
- B Point symmetry only
- C Both point and line symmetry
- D Neither point nor line symmetry



42 Which transformation could move the triangle P to triangle P' in a single step?



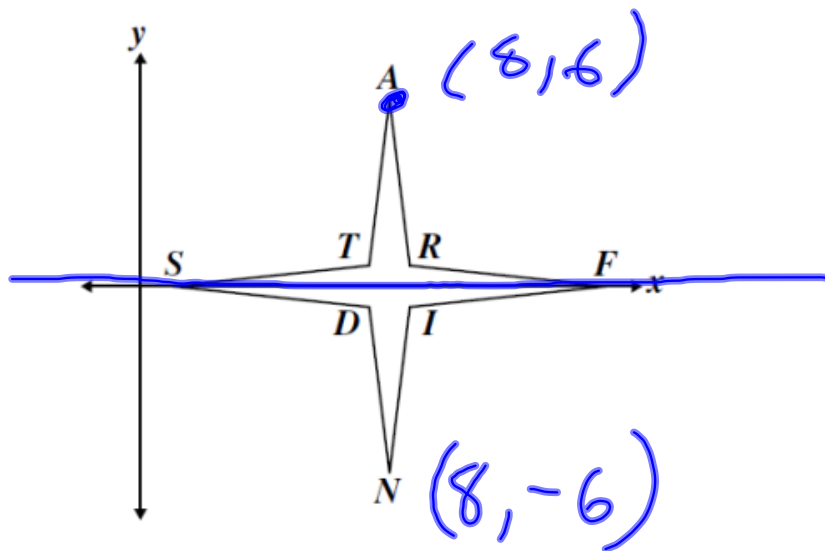
~~F~~ Reflection over $x = 4$

~~G~~ Rotation about $(2, 3)$

~~H~~ Reflection over $y = 4$

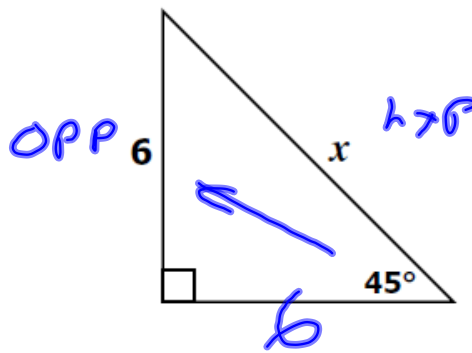
J Translation

- 43 Figure *STARFIND* is symmetric with respect to the x -axis. The coordinates of point A are $(8, 6)$. What are the coordinates of point N ?



22

$$\frac{\sin 45}{1} = \frac{6}{x}$$



In the figure, what is the value of x ?

F 6

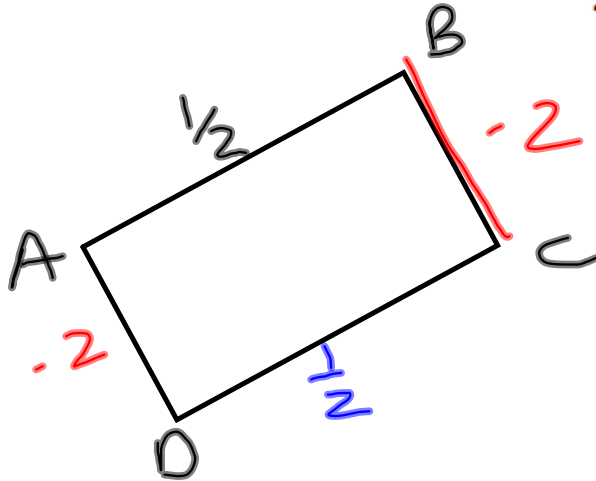
G $6\sqrt{2}$

H $6\sqrt{3}$

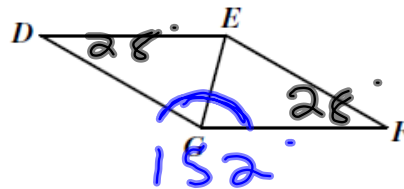
J 12

$$6^2 + 6^2 = c^2$$

29 In rectangle $ABCD$, the slope of \overline{AB} is $\frac{1}{2}$. What is the slope of \overline{CD} ?



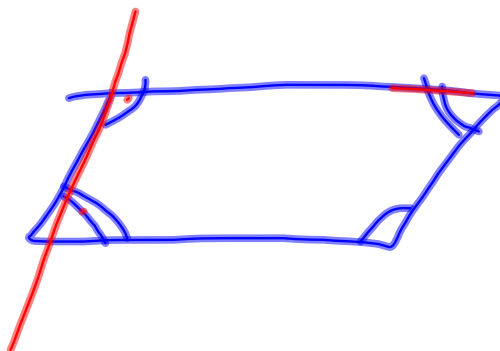
31 $DEFG$ is a rhombus with $m\angle EFG = 28^\circ$.



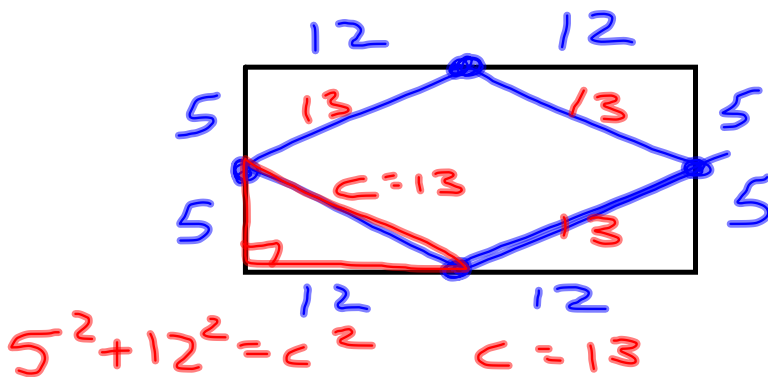
$$\frac{152}{2} = 76^\circ$$

What is $m\angle GDE$?

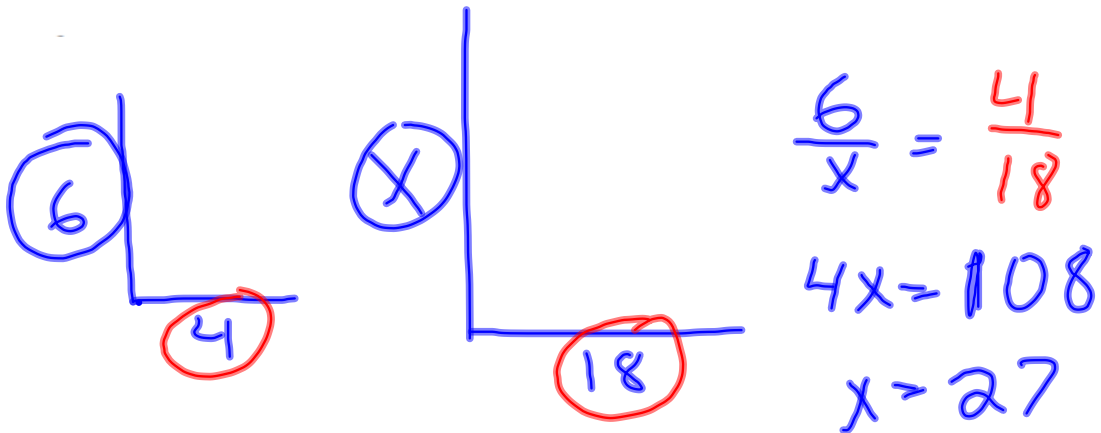
$\angle DGE$



- 33 A rectangular rug is 24 feet long and 10 feet wide. A rhombus design is formed inside the rug by joining the ~~midpoints~~ of each side of the rectangle. What is the length of each side of the rhombus?



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$$\frac{100}{4} = \frac{8}{4}$$

$$25 + 2$$

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- C $288\pi \text{ cm}^3$**
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Cone

$$L.A. = \pi \cdot r \cdot l$$

$$\frac{60\pi}{10\pi} = \frac{\pi \cdot r \cdot 10}{\pi \cdot 10}$$

$$6 = r$$

Sphere

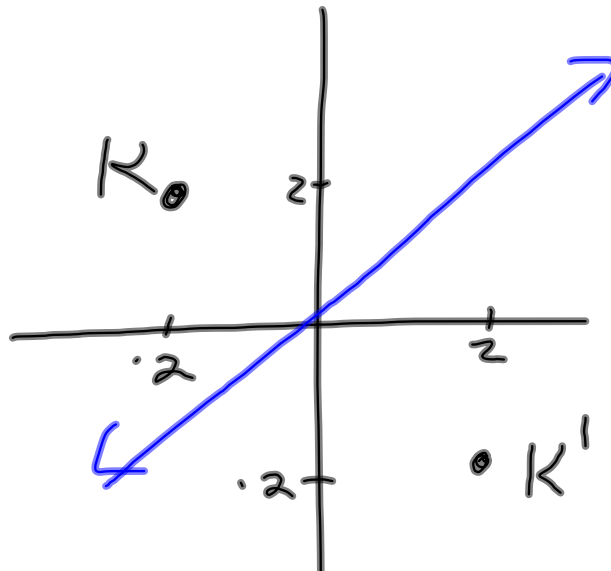
$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} \pi \cdot 6^3$$

$$= 288\pi$$

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- ~~G~~ $y = x$
- ~~H~~ x -axis
- ~~J~~ y -axis

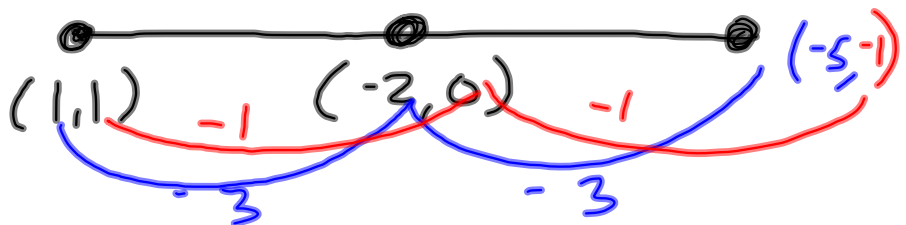


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$(1, 1)$

$(-2, 0)$

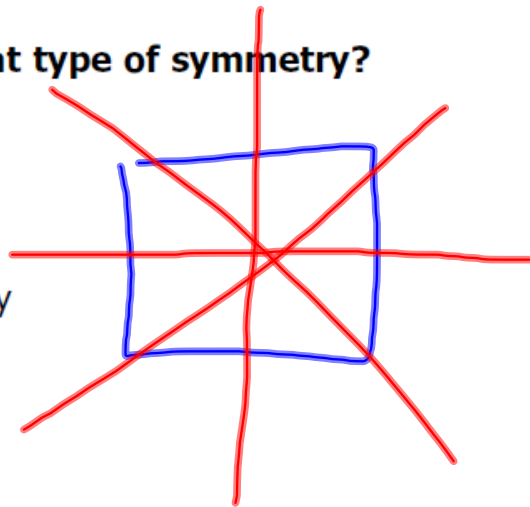
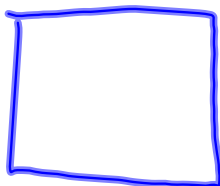
- A $(-0.5, 0.5)$
- B $(0.5, 0.5)$
- C $(-1, 0)$
- D $(-5, -1)$



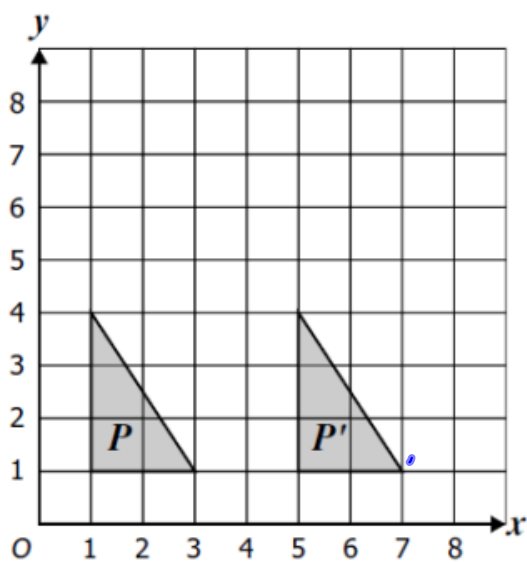
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- D Neither point nor line symmetry

4 sides



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- ~~I~~ Reflection over $x = 4$
- ~~G~~ Rotation about $(2, 3)$
- ~~H~~ Reflection over $y = 4$
- J** Translation

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