

# Test 3 Sample Questions

Find the measure of the supplement of the angle.

1) Find the supplement of  $37^\circ$ .

A)  $323^\circ$

B)  $143^\circ$

C)  $53^\circ$

D)  $233^\circ$

1) \_\_\_\_\_

2) Find the supplement of  $103^\circ$ .

A)  $77^\circ$

B)  $167^\circ$

C)  $257^\circ$

D)  $193^\circ$

2) \_\_\_\_\_

Find the measure of the complement of the angle.

3)  $7\frac{1}{2}^\circ$

A)  $172\frac{1}{2}^\circ$

B)  $82\frac{1}{2}^\circ$

C)  $83^\circ$

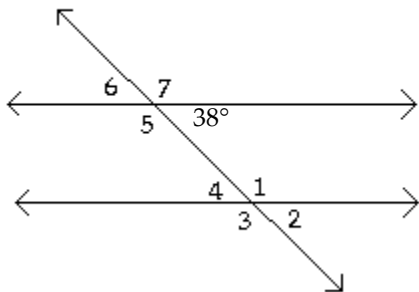
D)  $90^\circ$

3) \_\_\_\_\_

The figure shows two parallel lines intersected by a transversal. One of the angle measures is given. Find the measure of the indicated angle.

4)

4) \_\_\_\_\_



Find the measure of  $\angle 6$ .

A)  $38^\circ$

B)  $128^\circ$

C)  $52^\circ$

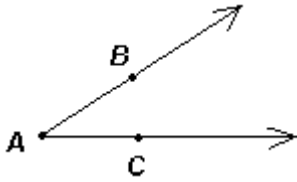
D)  $28^\circ$

Provide the following information.

- Name the vertex of the angle.
- Name the sides of the angle.
- Name the angle in three different ways.

5)

5) \_\_\_\_\_



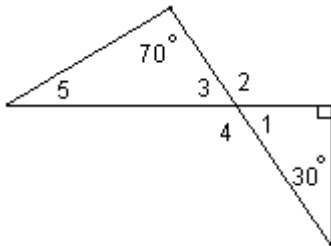
- A) a. point C  
 b.  $\overrightarrow{BA}$  and  $\overrightarrow{CA}$   
 c.  $\angle A$ ,  $\angle BAC$ ,  $\angle ABC$
- C) a. point A  
 b.  $\overrightarrow{AB}$  and  $\overrightarrow{AC}$   
 c.  $\angle A$ ,  $\angle BAC$ ,  $\angle CAB$

- B) a. point C  
 b.  $\overrightarrow{AB}$  and  $\overrightarrow{AC}$   
 c.  $\angle A$ ,  $\angle ABC$ ,  $\angle CAB$
- D) a. point BAC  
 b.  $\overrightarrow{BA}$  and  $\overrightarrow{CA}$   
 c.  $\angle A$ ,  $\angle BAC$ ,  $\angle CAB$

Find the measure of the angle.

- 6) Find the measure of angle 5 in the figure shown.

6) \_\_\_\_\_



- A)  $40^\circ$                       B)  $50^\circ$                       C)  $70^\circ$                       D)  $60^\circ$

Use similar triangles to solve the problem.

- 7) A flagpole casts a shadow of 36 ft. Nearby, a 10-ft tree casts a shadow of 3 ft. What is the height of the flag pole?

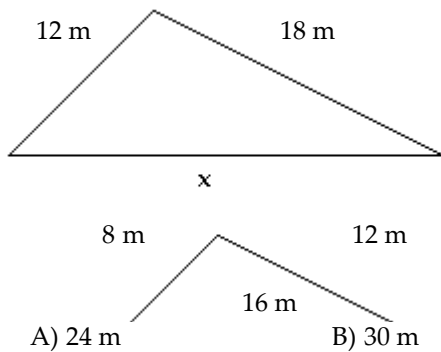
7) \_\_\_\_\_

- A) 1080 ft                      B) 0.8 ft                      C) 120 ft                      D) 10.8 ft

Use similar triangles and the fact that corresponding sides are proportional to find the length of the side marked with an x.

8)

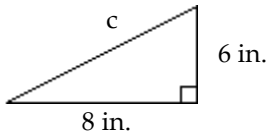
8) \_\_\_\_\_



- A) 24 m                      B) 30 m                      C) 23 m                      D) 16 m

Use the Pythagorean Theorem to find the missing length in the right triangle. Use a calculator to find square roots, rounding, if necessary, to the nearest tenth.

9)



9) \_\_\_\_\_

- A) 10 in.                      B) 50 in.                      C) 7 in.                      D) 100 in.

Use the Pythagorean Theorem to solve the problem. Use your calculator to find square roots, rounding, if necessary, to the nearest tenth.

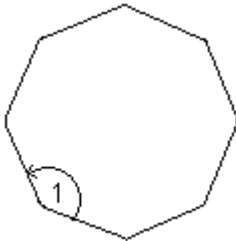
10) A 15-foot pole is supported by two wires that extend from the top of the pole to points that are each 8 feet from the base of the pole. Find the total length of the two wires.

10) \_\_\_\_\_

- A) 17 ft                      B) 34 ft                      C) 578 ft                      D) 46 ft

The figure shows a regular polygon. Find the measure of angle 1.

11)

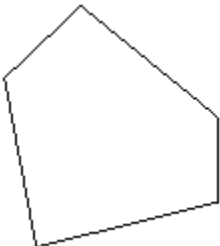


11) \_\_\_\_\_

- A)  $108^\circ$                       B)  $180^\circ$                       C)  $120^\circ$                       D)  $135^\circ$

Use the number of sides to name the polygon.

12)

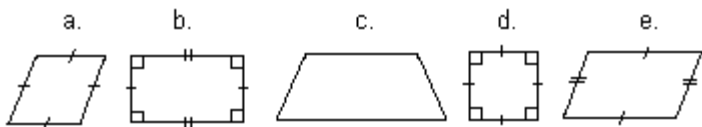


12) \_\_\_\_\_

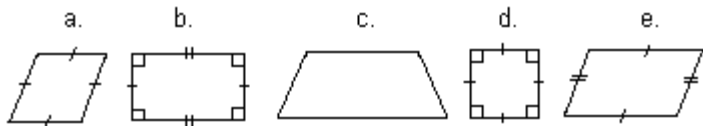
- A) hexagon                      B) heptagon                      C) quadrilateral                      D) pentagon

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

**Use the quadrilaterals below to solve the problem.**

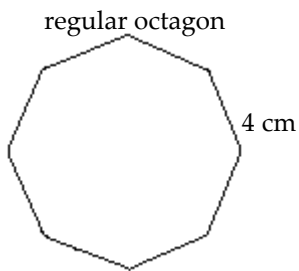


13) Which of the quadrilaterals shown have sides of equal length? Name these quadrilaterals. 13) \_\_\_\_\_



**Find the perimeter of the figure named and shown. Express the perimeter in the same unit of measure that appears on the given side or sides.**

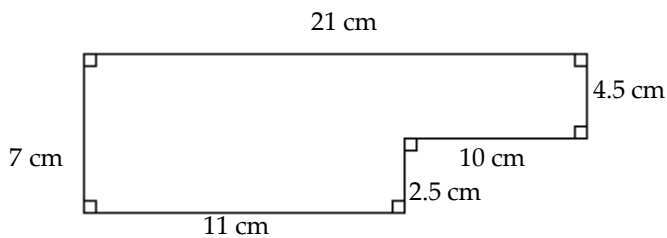
14) 14) \_\_\_\_\_



- A) 32 cm      B) 28 cm      C) 8 cm      D) 24 cm

**Find the perimeter of the figure shown. Express the perimeter in the same unit of measure that appears on the given side or sides.**

15) 15) \_\_\_\_\_



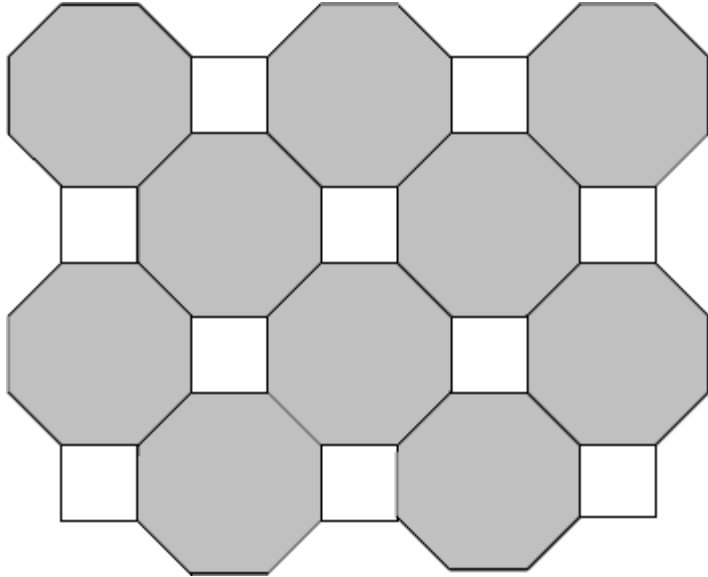
- A) 59 cm      B) 56 cm      C) 53.5 cm      D) 51.5 cm

**SHORT ANSWER.** Write the word or phrase that best completes each statement or answers the question.

A tessellation formed by two or more regular polygons is shown.

- Name the types of regular polygons that surround each vertex.
- Determine the number of angles that come together at each vertex, as well as the measures of these angles
- Use the angle measures from part (b) to explain why the tessellation is possible.

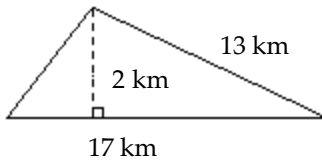
16)



16) \_\_\_\_\_

Use formulas to find the area of the figure.

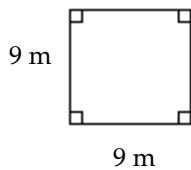
17)



- A)  $13 \text{ km}^2$       B)  $110.5 \text{ km}^2$       C)  $34 \text{ km}^2$       D)  $17 \text{ km}^2$

17) \_\_\_\_\_

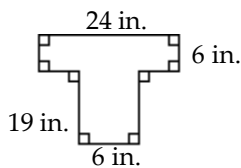
18)



- A)  $36 \text{ m}^2$       B)  $81 \text{ m}^2$       C)  $18 \text{ m}^2$       D)  $13 \text{ m}^2$

18) \_\_\_\_\_

19)



- A)  $162 \text{ in.}^2$       B)  $116 \text{ in.}^2$       C)  $175 \text{ in.}^2$       D)  $258 \text{ in.}^2$

19) \_\_\_\_\_

**Solve the problem. Round all circumference and area calculations to the nearest whole number.**

20) How many flowers spaced every 4 inches are needed to surround a circular garden with a 15-foot radius? Round all circumference and area calculations to the nearest whole number. 20) \_\_\_\_\_

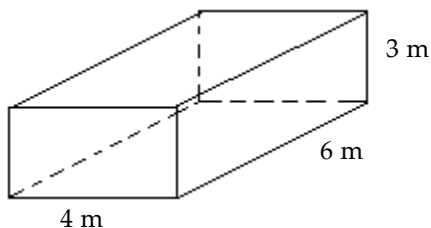
- A) 266 flowers      B) 376 flowers      C) 141 flowers      D) 282 flowers

21) How much fencing is required to enclose a circular garden whose diameter is 287 m? 21) \_\_\_\_\_

- A) 451 m      B) 1803 m      C) 258,770 m      D) 902 m

**Find the surface area of the figure.**

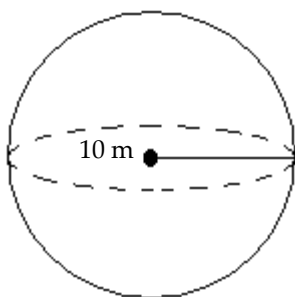
22) \_\_\_\_\_



- A)  $72 \text{ m}^2$       B)  $144 \text{ m}^2$       C)  $108 \text{ m}^2$       D)  $54 \text{ m}^2$

**Find the volume of the figure. If necessary, round the answer to the nearest whole number.**

23) \_\_\_\_\_



- A)  $524 \text{ m}^3$       B)  $419 \text{ m}^3$       C)  $2356 \text{ m}^3$       D)  $4189 \text{ m}^3$

**Solve the problem.**

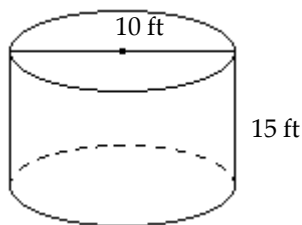
24) A building contractor is to dig a foundation 45 feet long, 25 feet wide, and 6 feet deep. The contractor pays \$15 per load for trucks to remove the dirt. Each truckload holds 5 cubic yards. 24) \_\_\_\_\_

What is the cost to the contractor to have all the dirt hauled away?

- A) \$20,250      B) \$3750      C) \$50      D) \$750

**Find the volume of the figure. If necessary, round the answer to the nearest whole number.**

25) \_\_\_\_\_



- A)  $4712 \text{ ft}^3$       B)  $471 \text{ ft}^3$       C)  $1178 \text{ ft}^3$       D)  $236 \text{ ft}^3$