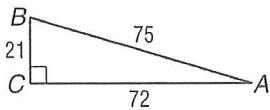


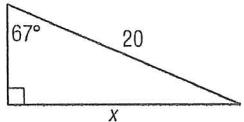
PRACTICE EXAM 2021 GEOMETRY**Multiple Choice***Identify the choice that best completes the statement or answers the question.*

1. Find $\cos A$ in $\triangle ABC$.



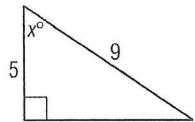
- a. $\frac{7}{24}$ c. $\frac{25}{24}$
b. $\frac{7}{25}$ d. $\frac{24}{25}$

2. Find x to the nearest tenth.



- a. 7.3. c. 18.4
b. 17.3. d. 47.1

3. Find x to the nearest degree.



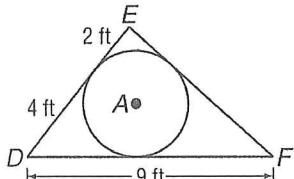
- a. 56 c. 34
b. 45 d. 29

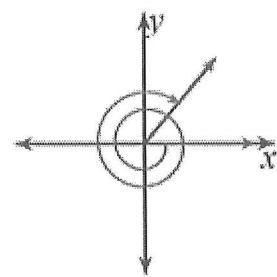
4. If $\sin A = 30/34$, find the value of $\tan A$.

- a. $\frac{17}{8}$ c. $\frac{15}{8}$
b. $\frac{8}{17}$ d. $\frac{17}{15}$

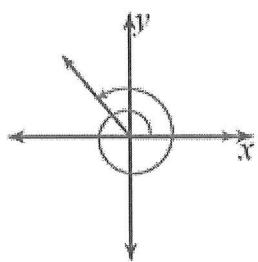
5. If a 20-foot ladder makes a 65° angle with the ground, how many feet up a wall will it reach? Round your answer to the nearest tenth.

- a. 8.5 ft c. 18.1 ft
b. 10 ft d. 42.9 ft

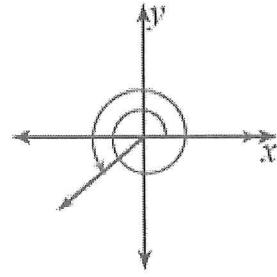
- ____ 6. Find the angle of elevation of the sun if a building 100 feet tall casts a shadow 150 feet long. Round to the nearest degree.
- 60°
 - 48°
 - 42°
 - 34°
- ____ 7. A circle has an area of $169\pi \text{ in}^2$, find the circumference.
- 13
 - 26
 - 13π
 - 26π
- ____ 8. If \overline{DE} , \overline{EF} , and \overline{FD} are tangent to $\odot A$, find EF .
- 
- ____ 9. In $\odot X$, chords \overline{AB} and \overline{CD} are congruent and \overline{AB} is 9 units from X . Find the distance from \overline{CD} to X .
- 4.5 units
 - 9 units
 - 18 units
 - cannot tell
- ____ 10. Sketch the angle -670°



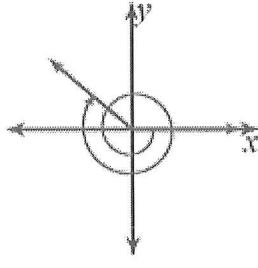
a.



c.



b.



d.

____ 11. Find the exact value of $\sin \theta$ if the terminal side of θ in standard position contains the point $(-4, -3)$.

- a. $-\frac{4}{5}$ c. $\frac{3}{5}$
b. $-\frac{3}{5}$ d. $\frac{4}{5}$

____ 12. Which angle is coterminal with a -400° angle in standard position?

- a. 40° c. 320°
b. 80° d. 400°

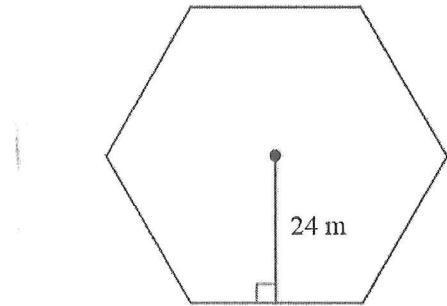
____ 13. Find the exact value of $\cos \theta$ if the terminal side of θ in standard position contains the point $(6, -8)$.

- a. $-\frac{4}{5}$ c. $\frac{4}{5}$
b. $\frac{3}{5}$ d. $-\frac{3}{5}$

____ 14. Given $\cos \theta = \frac{-1}{2}$ and is in Quadrant III, find $\sin \theta$.

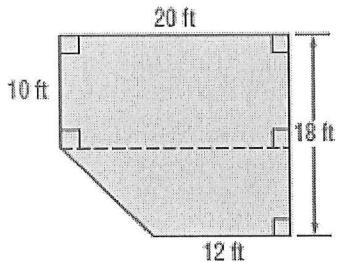
- a. $\sin \theta = \frac{-\sqrt{3}}{2}$ c. $\sin \theta = \frac{1}{2}$
b. $\sin \theta = \frac{-\sqrt{2}}{2}$ d. $\sin \theta = 1$

____ 15. Find the area of the regular hexagon if the apothem is 24.

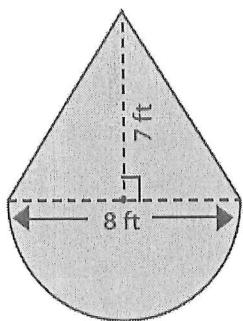


- a. $6\sqrt{3} \text{ m}^2$ b. $576\sqrt{3} \text{ m}^2$ c. $192\sqrt{3} \text{ m}^2$ d. $1152\sqrt{3} \text{ m}^2$

16. A landscape architect gives the diagram of a yard to a fencing company. What is the area of the yard to be fenced?



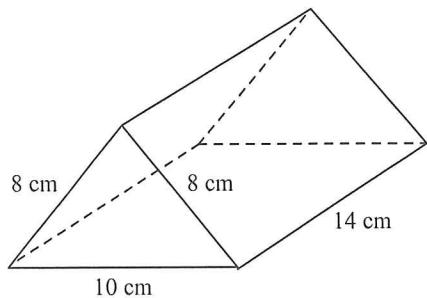
17. Find the area of the half circle and triangle composite figure.



- | | |
|------------------------------|------------------------------|
| a. $8\pi + 28 \text{ ft}^2$ | c. $8\pi + 7 \text{ ft}^2$ |
| b. $32\pi + 56 \text{ ft}^2$ | d. $49\pi + 28 \text{ ft}^2$ |

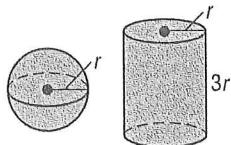
Find the volume of the prism. Round to the nearest tenth if necessary.

18.



- | | |
|---------------------------|--------------------------|
| a. 1120.0 cm ³ | c. 660.4 cm ³ |
| b. 560.0 cm ³ | d. 437.1 cm ³ |

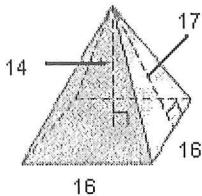
____ 19. Which solid has the greater volume?



- a. sphere
- b. cylinder
- c. The volumes are equal.
- d. not enough information

Find the surface area of the solid.

____ 20.

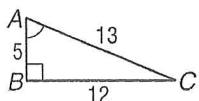


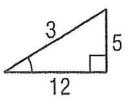
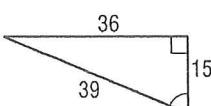
- a. 800 units²
- b. 392 units²
- c. 704 units²
- d. 288 units²

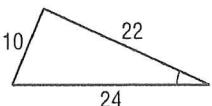
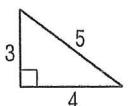
____ 21. Given the point $(6\sqrt{3}, -6)$ is on the terminal side of an angle, find $\cos \theta$.

- a. $\cos \theta = -1$
- b. $\cos \theta = \frac{\sqrt{3}}{2}$
- c. $\cos \theta = \frac{1}{2}$
- d. $\cos \theta = \frac{-\sqrt{2}}{2}$

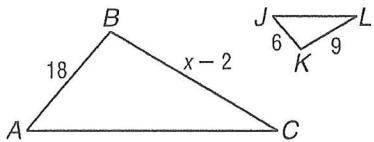
____ 22. Find the triangle similar to $\triangle ABC$ below



- a.
- b.


- c.
- d.


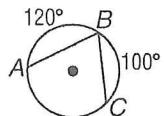
23. Find x if $\triangle ABC \sim \triangle JKL$.



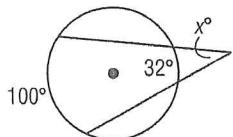
- _____ 24. A 5-foot tall student cast a 4-foot shadow. If the tree next to her cast a 44-foot shadow, what is the height of the tree?

- a. $35\frac{1}{5}$ ft c. $51\frac{1}{2}$ ft
 b. 45 ft d. 55 ft

25. Find $m\angle ABC$.

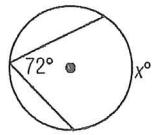


26. Find x .



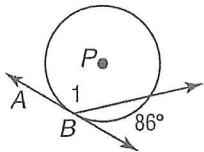
- | | | | |
|----|-----|----|----|
| a. | 132 | c. | 66 |
| b. | 68 | d. | 34 |

27. Find x .



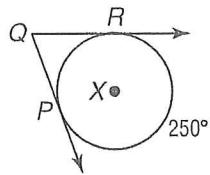
- | | | | |
|----|----|----|-----|
| a. | 36 | c. | 144 |
| b. | 72 | d. | 180 |

- ____ 28. If \overleftrightarrow{AB} is tangent to $\odot P$ at B , find $m\angle 1$.



- a. 43 c. 137
b. 86 d. 274

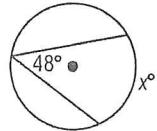
- ____ 29. Find $m\angle PQR$ if \overrightarrow{QP} and \overrightarrow{QR} are tangent to $\odot X$.



- a. 70 c. 125
b. 110 d. 140

Short Answer

30. Find x .



Please remember there will be SA and Volume on the exam as well so be sure to study that material!

PRACTICE EXAM 2021 GEOMETRY
Answer Section

MULTIPLE CHOICE

1. D
2. C
3. A
4. C
5. C
6. D
7. D
8. C
9. B
10. A
11. B
12. C
13. B
14. A
15. D
16. C
17. A
18. D
19. B
20. A
21. B
22. B
23. D
24. D
25. B
26. D
27. C
28. C
29. A

SHORT ANSWER

30. 96