

Finish Benchmark Test  
10 min

If you're already done with the benchmark test,  
get out Multiple Choice Review to work on

Video Permission Slips?

## Hw Trackers due Friday - Wk 10-11

Blue half sheet (Tuesday)

Pink (Wednesday)

Pink (Thursday)

Free Response Review

Multiple Choice Review

**/50**

Finish going over Multiple Choice Practice Final

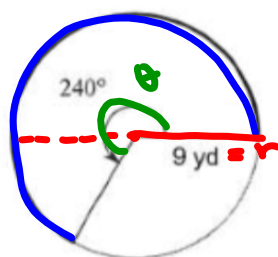
\_\_\_\_ 11. Given  $g(n) = n^3 + 2n^2$  find  $g(-6)$

- a. 45
- b. 1
- c. 16
- d. -144

$$(-6)^3 + 2(-6)^2$$

\_\_\_ 12. Find the length of the arc.

- a. 169.6 yd
- b. 26.2 yd
- c. 77.7 yd
- d. 538.8 yd



$$d = 18$$
$$C = 18\pi \left( \frac{240}{360} \right)$$

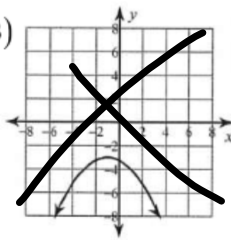
$$C = 2\pi r$$

$$C = \pi d$$

13. Identify the vertex, axis of symmetry, and min/max value of  $y = -\frac{1}{4}(x-3)^2 + 1$ . (3, 1)

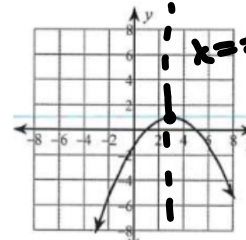
a.

Vertex:  $(-1, -3)$   
 Axis:  $x = -1$   
 Max:  $-3$



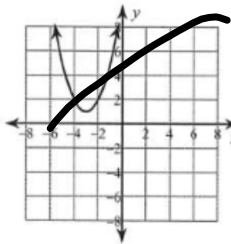
b.

Vertex:  $(3, 1)$   
 Axis:  $x = 3$   
 Max:  $1$



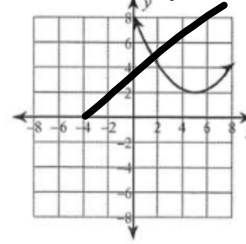
c.

Vertex:  $(-3, 1)$   
 Axis:  $x = -3$   
 Max:  $1$



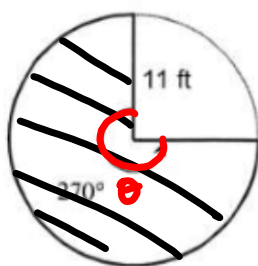
d.

Vertex:  $(5, 2)$   
 Axis:  $x = 5$   
 Max:  $2$



\_\_\_\_ 14. Find the area of the sector.

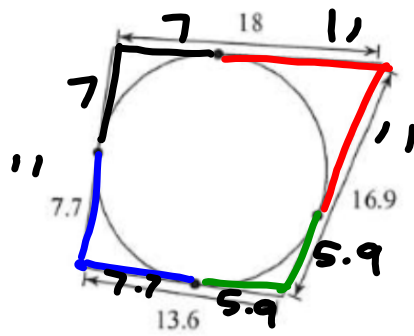
- a.  $8.4 \text{ ft}^2$
- b.  $285.1 \text{ ft}^2$
- c.  $102635.8 \text{ ft}^2$
- d.  $167.6 \text{ ft}^2$



$$A = \pi r^2$$
$$\pi 11^2 \left( \frac{270}{360} \right)$$
$$121\pi \left( \frac{270}{360} \right)$$

\_\_\_15. Find the perimeter of the polygon.  
Assume that lines which appear to be tangent are tangent.

- a. 45.3
- b. 44.8
- c. 33.2
- d. 39.7

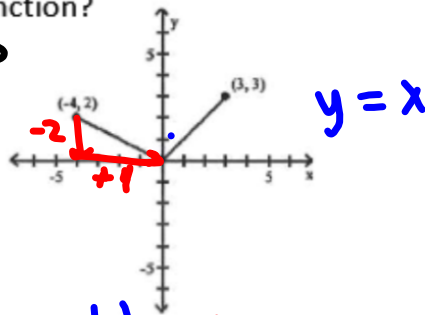


\_\_\_\_ 16. The graph represents which piece-wise function?

$y = mx + b$

$-2 = -\frac{1}{2}x$

$y = -\frac{1}{2}x$



~~a.  $f(x) = \begin{cases} -\frac{1}{2}x & \text{if } -4 < x < 0 \\ x & \text{if } 0 < x < 3 \end{cases}$~~

~~b.  $f(x) = \begin{cases} -2x & \text{if } -4 \leq x \leq 0 \\ x & \text{if } 0 < x \leq 3 \end{cases}$~~

c.  $f(x) = \begin{cases} -\frac{1}{2}x & \text{if } -4 \leq x \leq 0 \\ x & \text{if } 0 < x \leq 3 \end{cases}$

~~d.  $f(x) = \begin{cases} \frac{1}{2}x & \text{if } -4 < x < 0 \\ x & \text{if } 0 < x < 3 \end{cases}$~~



17. Find  $p(F|C)$ .

	Friend	Not Friend	Total
Class	74	275	349
No Class	46	1005	1,051
Total	120	1,280	1400

- a. 0.21      b. 0.05  
c. 0.62      d. 0.27

$$P(F|C) = \frac{74}{349}$$

A gumball machine contains 5 pink gumballs, 10 yellow gumballs, and 7 blue gumballs. Find the probability of randomly selecting the following:

\_\_\_18. A yellow gumball *22 total*

a.  $\frac{5}{11}$

b.  $\frac{5}{22}$

c.  $\frac{7}{22}$

d.  $\frac{10}{11}$

$$\frac{10 \div 2}{22 \div 2} = \frac{5}{11}$$

\_\_\_19. A blue gumball and then a pink gumball without replacement.

a.  $\frac{35}{43}$

b.  $\frac{5}{66}$

c.  $\frac{4}{7}$

d.  $\frac{35}{484}$

$$\frac{7}{22} \cdot \frac{5}{21} =$$

$$\frac{5}{66}$$

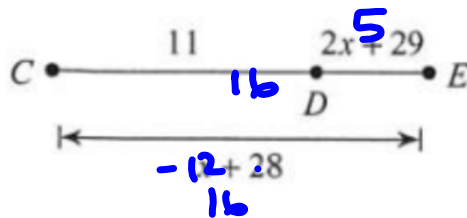
\_\_\_\_ 20. Find a value for  $x$  that would prove the segment addition postulate.

a. -11

b. 1

c. 5

d. -12



$$\underline{11} + 2x + \underline{29} = x + 28$$

$$2x + 40 = x + 28$$

$$-x \quad -x$$

$$x + 40 = 28$$

$$-40 \quad -40$$

$$x = -12$$

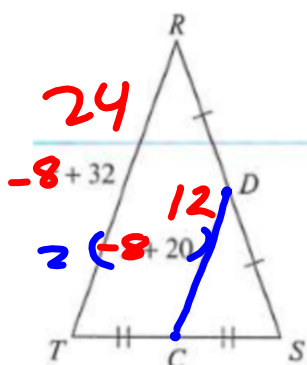
21. Solve for x.

a. -8

b. -6

c. 11

d. -10



$$2(x+20) = x+32$$

$$2x+40 = x+32$$

$$-x \quad -x$$

$$x+40 = 32$$

$$-40 \quad -40$$

$$x = -8$$

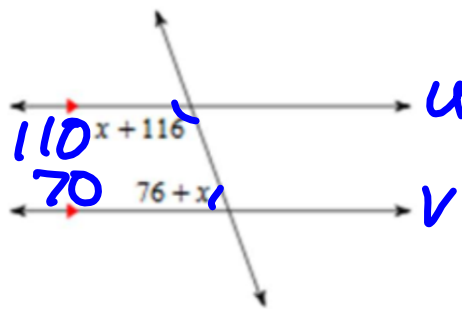
\_\_\_\_ 22. State the value for  $x$  that proves lines  $u$  and  $v$  are parallel.

a. 40

b. 6

c. 14

d. -6



$$x + 116 + 76 + x = 180$$

$$2x + 192 = 180$$

$$-192 \quad -192$$

$$\frac{2x}{2} = \frac{-12}{2}$$

$$x = -6$$

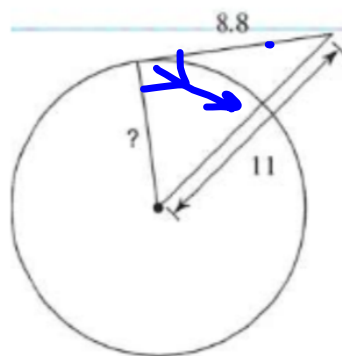
\_\_\_ 23. Find the indicated segment length.  
Assume that lines which appear to be tangent are tangent.

a. 43.6

b. 14.1

c. 6.6

d. 4.4



$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 x^2 + 8.8^2 &= 11^2 \\
 -8.8^2 &-8.8^2 \\
 \hline
 \sqrt{x^2} &= \sqrt{43.56} \\
 x &= 6.6
 \end{aligned}$$

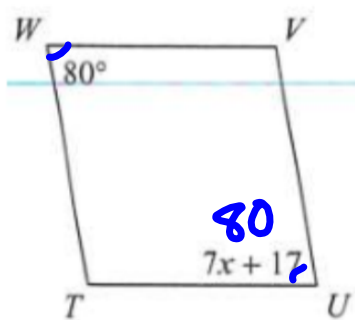
\_\_\_\_ 24. Given a parallelogram, solve for x.

a. 10

b. 1

c. 3

d. 9



$$\begin{aligned} 7x + 17 &= 80 \\ -17 &\quad -17 \\ \hline 7x &= 63 \\ \frac{7x}{7} &= \frac{63}{7} \\ x &= 9 \end{aligned}$$

\_\_\_25. State if the triangles are similar. If so, state how you know they are similar and complete the similarity statement

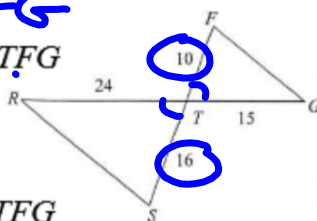
$$\triangle TSR \sim \triangle TFG$$

a. similar; SAS similarity;  $\triangle TFG$

b. not similar

c. similar; AA similarity;  $\triangle TFG$

d. similar; SSS similarity;  $\triangle TFG$



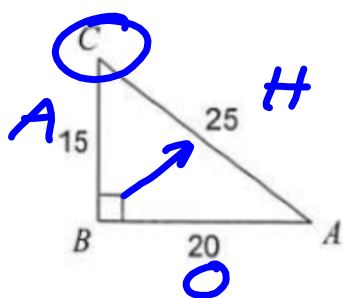
$$\frac{10}{16} = \frac{15}{24}$$

$$\frac{5}{8} = \frac{5}{8}$$



26. Find the value of the trigonometric ratio  $\tan C$ .

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



$$\tan \frac{O}{A}$$
$$\tan = \frac{20 \div 5}{15 \div 5}$$
$$\frac{4}{3}$$

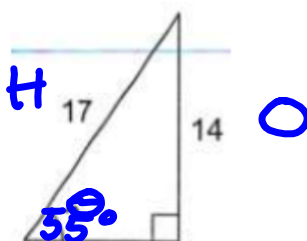
\_\_\_27. Find the measure of the indicated angle to the nearest degree.

a. 55°

b. 35°

c. 33°

d. 51°



$$\sin \theta = \frac{14}{17}$$

*Handwritten note: ~~sin~~  $\theta = \sin^{-1}(\frac{14}{17})$*

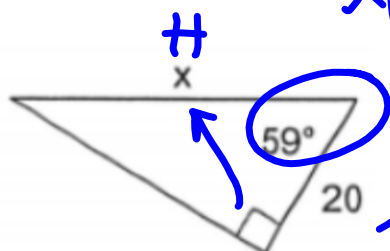
\_\_\_28. Find the missing side. Round to the nearest tenth.

a. 38.8

b. 23.3

c. 21.2

d. 10.3



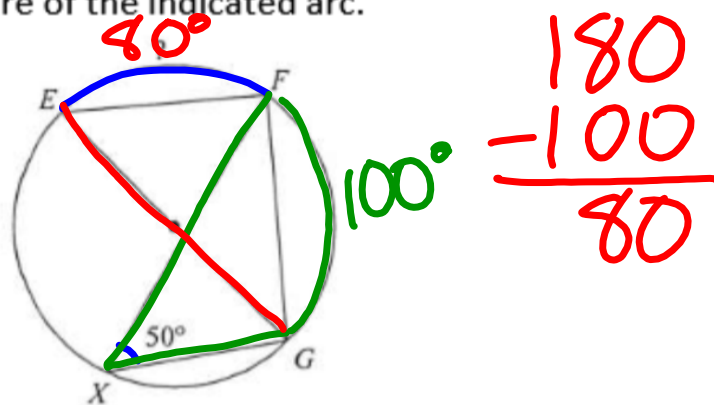
$$x(\cos 59) = \frac{20}{x}$$

$$\frac{x \cos 59}{\cos 59} = \frac{20}{\cos 59}$$

$$x = 38.8$$

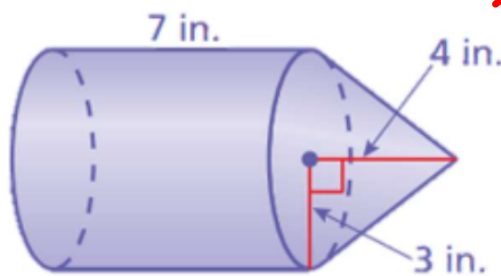
\_\_\_ 29. Find the measure of the indicated arc.

- a.  $98^\circ$
- b.  $64^\circ$
- c.  $80^\circ$
- d.  $113^\circ$



\_\_\_30. Find the volume. Round to the nearest hundredth, if necessary.

- a.  $254.47 \text{ in}^3$
- b.  $58.90 \text{ in}^3$
- c.  $311.02 \text{ in}^3$
- d.  $235.62 \text{ in}^3$



$$\pi r^2 h + \frac{\pi r^2 h}{3}$$

$$\pi 3^2 (7) + \frac{\pi 3^2 (4)}{3}$$

$$63\pi + \frac{36\pi}{3}$$

..

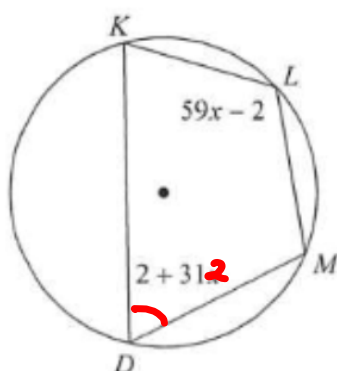
\_\_\_ 31. Find  $m\angle KDM$

a.  $57^\circ$

b.  $70^\circ$

c.  $95^\circ$

**d.  $64^\circ$**



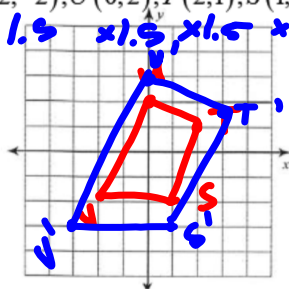
$$59x - 2 + 2 + 31x = 180$$

$$\frac{90x}{90} = \frac{180}{90}$$

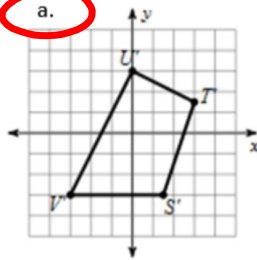
$$x = 2$$

32. Graph the points  $V(-2,-2), U(0,2), T(2,1), S(1,-2)$ , then dilate the figure by 1.5

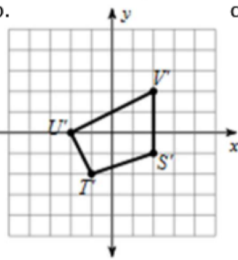
*x1.5 x1.5 x1.5 x1.5*



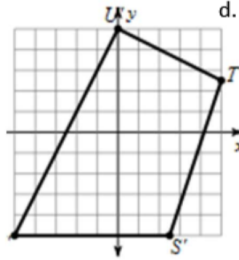
a.



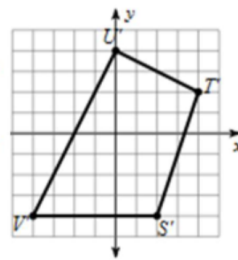
b.



c.



d.



33. What is the equation of the circle shown to the right. Use the information provided to write the equation of the circle.

- ~~a.~~  $(x - 4)^2 + (y - 2)^2 = 9$   
**b.**  $(x + 4)^2 + (y + 2)^2 = 9$   
c.  $(x + 4)^2 + (y + 2)^2 = 3$   
~~d.~~  $(x - 4)^2 + (y - 2)^2 = 6$

