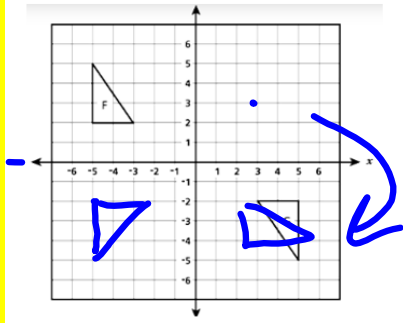


1. Use the figure below to answer the question.



Which sequence does NOT transform triangle F to triangle G?

- A) 180° clockwise rotation
- B) 180° counterclockwise rotation
- C) reflection over the x axis, then y axis
- D) reflection over the y-axis, then 90° clockwise rotation

### Carowinds money due by Friday

2. Which expression is equivalent to  $2^2 \times \frac{2}{2^4}$

- A)  $2^{-2}$
- B)  $2^{-1}$
- C)  $2^6$
- D)  $2^7$

$$\frac{2^2}{1} \cdot \frac{2^1}{2^4} = \frac{2^3}{2^4}$$

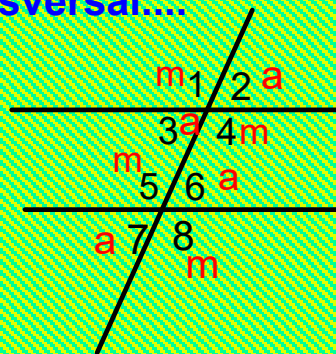
$$2^2 \cdot 2^{-3} = 2^{-1} = \frac{1}{2}$$

$$2^2 \cdot \frac{1}{2^3} = \frac{2^2}{2^3} = \frac{1}{2}$$

## Angles

Let's talk about parallel lines and a transversal...

Two parallel lines cut by a transversal create 8 special angles. Many are congruent to each other.... (equal to each other)



All of the m's are congruent to each other. All of the a's are congruent to each other.  $m+a = 180$  (supplemental)

### Exterior Angle Example

The outside Angle of a Triangle always equals the sum of the two far away inside angles.

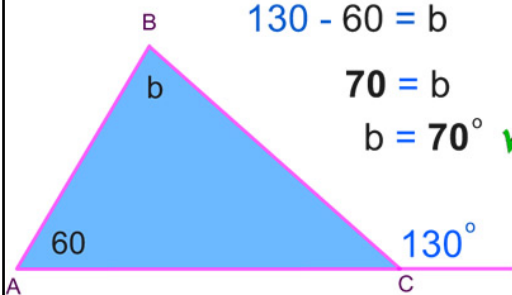
$$\text{Exterior Angle } C^\circ = a + b$$

$$130 = 60 + b$$

$$130 - 60 = b$$

$$70 = b$$

$$b = 70^\circ \checkmark$$



### Exterior Angle Example

The outside Angle of a Triangle always equals the sum of the two far away inside angles.

$$\text{Exterior Angle } C^\circ = a + b$$

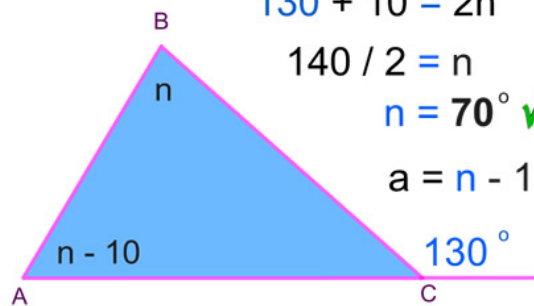
$$130 = n - 10 + n$$

$$130 + 10 = 2n$$

$$140 / 2 = n$$

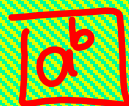
$$n = 70^\circ \checkmark$$

$$a = n - 10 = 60^\circ \checkmark$$



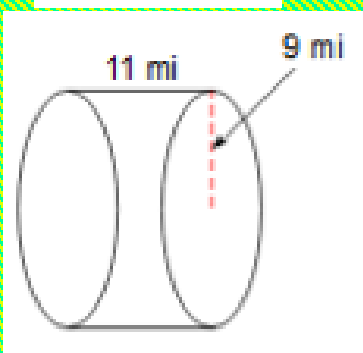
Click here for  
Flocabulary rap

## Volume Formulas (Use 3.14 for pi)



Cylinder:

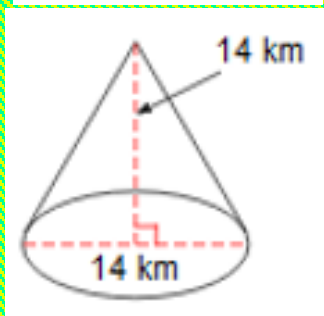
$$V = \pi r^2 h$$



Cone:

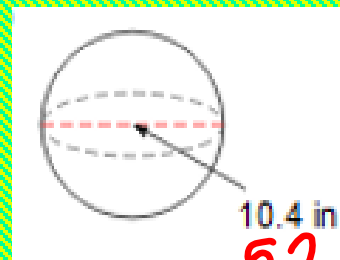
$$V = \frac{1}{3} \pi r^2 h$$

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



Sphere:

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



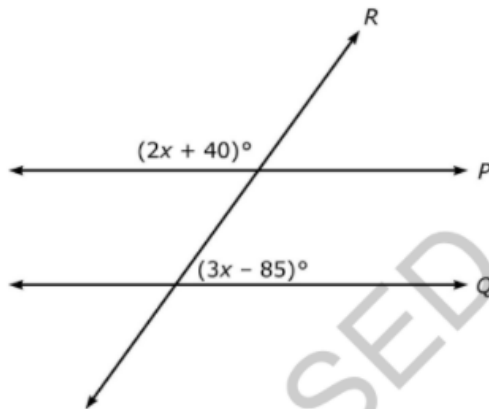
5.2

Now, you practice with some previous EOG questions....

Go to [joinpd.com](http://joinpd.com)



In the diagram, parallel lines  $P$  and  $Q$  are cut by transversal  $R$ .



What is the value of  $x$ ?

$$2x + 40 + 3x - 85 = 180$$

$$5x - 45 = 180$$

$$+45 \quad +45$$

$$\frac{5x}{5} = \frac{225}{5}$$

$$x = 45$$



Students, draw anywhere on this slide!

Pear Deck  
Do not

A square is drawn below.

What is the value of  $x$ ?

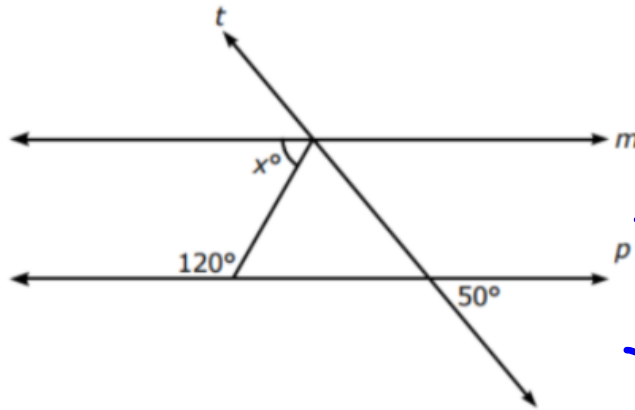
Students, draw anywhere on this slide!

Lines  $l$  and  $m$  are parallel to one another and cut by transversals  $s$  and  $t$ .

- A. 40 degrees
- B. 80 degrees
- C. 120 degrees
- D. 140 degrees

What is the value of  $x$ ?

Lines  $m$  and  $p$  are parallel and cut by transversal  $t$  in this figure.



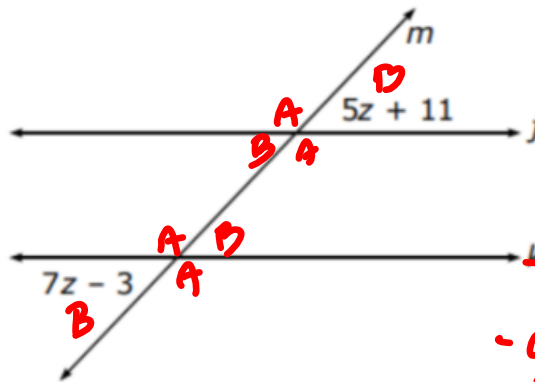
What is the value of  $x$ ?

Handwritten work for the first problem:

$$\begin{array}{r}
 x + 120 = 180 \\
 - 120 \quad - 120 \\
 \hline
 x = 60
 \end{array}$$

There are also blue handwritten annotations on the diagram: 'A B' above line m, 'B X A' above line p, and 'A 120' below line p.

In the figure, line  $j$  is parallel to line  $k$ .



What is the value of  $z$ ?

Handwritten work for the second problem:

$$\begin{array}{r}
 5z + 11 = 7z - 3 \\
 + 3 \quad + 3 \\
 \hline
 5z + 14 = 7z \\
 - 5z \quad - 5z \\
 \hline
 14 = 2z \\
 \frac{14}{2} = \frac{2z}{2} \\
 7 = z
 \end{array}$$



Students, draw anywhere on this slide!

Peer De...

What is the measure of angle QRS in this figure?

A

B

C

D

Handwritten notes:  $9 + 13 = 22$ ,  $20(6) + 12 = 120 + 12 = 132$ ,  $132x = 6$ ,  $22x = 20x + 12$ ,  $2x = 12$ ,  $x = 6$ .

Alexis has a cylindrical trash can with a diameter of 24 cm and a height of 42 cm. What is the **approximate** volume of the can?

A 1,008 cm<sup>3</sup> C 19,000 cm<sup>3</sup>

B 3,167 cm<sup>3</sup> D 76,000 cm<sup>3</sup>

Handwritten notes:  $r = \frac{24}{2}$ ,  $V = \pi r^2 h$ ,  $V = 3.14(12)^2(42)$ .

The diameter of a sphere is 6 cm. What is the volume of the sphere?

(Note:  $v = \frac{4}{3}\pi r^3$ )

- A  $8\pi \text{ cm}^3$
- B  $36\pi \text{ cm}^3$
- C  $144\pi \text{ cm}^3$
- D  $288\pi \text{ cm}^3$

$r = 3$

$$\frac{4}{3} (3)^3$$

$$\frac{4}{3} (27)$$

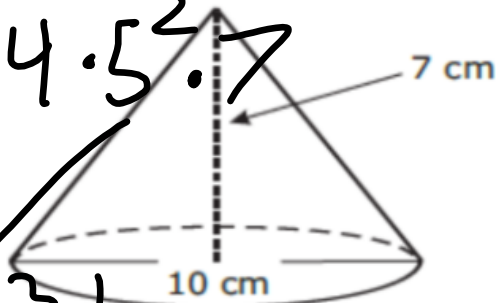
$$36\pi$$

What is the *approximate* volume of the cone below?



$$\frac{1}{3} \cdot 3.14 \cdot 5^2 \cdot 7$$

$$183.1$$



- A  $70 \text{ cm}^3$
- B  $183 \text{ cm}^3$
- C  $549 \text{ cm}^3$
- D  $733 \text{ cm}^3$

