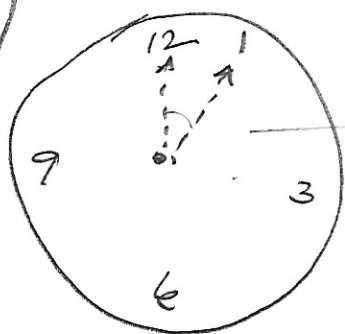


ACT Math

1.



Clock has 12 sections, so this part will 12 parts of the circle

$$360^\circ / 12 = \underline{30^\circ}$$

2. Probability : set $\{2, 3, 7, 12, 15, 22, 72, 108\}$

Look at and see which #'s will be divide by 2, ^{and} 3

Both cases

$$12, 72, 108 - \underline{3/8}$$

3. Check table - trial + test

4. $n=8$ $16 \cdot 2^m = 4^{n-8}$ $m=?$

$$16 \cdot 2^m = 4^{8-8}$$

$$16 \cdot 2^m = 4^0 \Rightarrow 16 \cdot 2^m = 1$$

$$2^m = \frac{1}{16} \Rightarrow 2^m = 16^{-1} \Rightarrow 2^m = (2)^{4 \cdot -1}$$

$$2^m = 2^{-4} \Rightarrow \underline{m = -4}$$

5. $n^\circ, a^\circ, b, c^\circ > 0 \rightarrow$
 $n^\circ < a^\circ$
 $c^\circ > a^\circ$
 $b > c^\circ$

— look at the cases.
 $b - n > a - n$
 $\checkmark b > a$
B.

6. $C = 16\pi$ $r = ?$

Recall formulas (formula sheet given)

$$C = 2\pi r$$
$$\frac{16\pi}{2\pi} = \frac{2\pi r}{2\pi}$$
$$\underline{8 = r}$$

SAT Practice

1. Write equation from word problem

$$4 \cdot x + 12 = 8$$

$$4x + 12 = 8$$

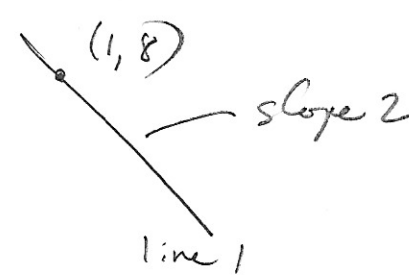
$$\begin{array}{r} 4x + 12 = 8 \\ -12 \quad -12 \\ \hline 4x = -4 \end{array} \Rightarrow \frac{4x}{4} = \frac{-4}{4} \Rightarrow x = -1$$

added $\rightarrow +$
result $\rightarrow =$

$$2 \cdot x + 7 = ?$$

$$2(-1) + 7 \Rightarrow -2 + 7 = \underline{5} \quad \underline{B}$$

2. xy



(1, 8)
slope 2
line 1

$$(a, b) \rightarrow a + b$$

$$\text{Line 1: } (1, 8) \quad m = 2$$

$$y = mx + b$$

$$8 = 2(1) + b$$

$$8 = 2 + b \quad b = 6$$

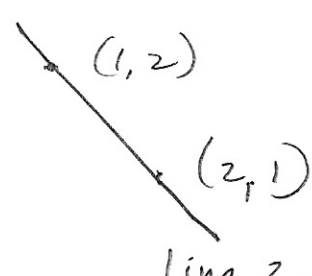
$$\text{Eq: } y = 2x + 6 \quad (1)$$

set equal

$$2x + 6 = -x + 3$$

$$2x = -x - 3 \Rightarrow$$

$$\frac{3x}{3} = \frac{-3}{3} \Rightarrow \frac{x}{1} = -1$$



(1, 2)
(2, 1)
line 2

$$\text{Line 2: } (1, 2) \quad (2, 1)$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - 2}{2 - 1} = \frac{-1}{1} = -1$$

$$y = mx + b$$

$$2 = -1(1) + b$$

$$2 = -1 + b \quad b = 3$$

$$\text{Eq: } y = -x + 3 \quad (2)$$

$$\left. \begin{array}{l} y = 2(-1) + 6 \\ = -2 + 6 \\ y = 4 \Rightarrow b \end{array} \right\} \text{ (B)}$$