Assignment #6-2 Secondary 3 Honors

Carnegie Problems: Pg. 383 #1(a, b, c) Pg. 384 #2(a, b, c)

Precalculus Book: Pg. 203 1, 6, 7, 11, 14, 25, 30, 33, 38, 39, 40, 47, 51, 67, 70, 71, 80, 91, 114

Additional Problems:

1. Graph $y = 2^{x-1} + 3$. Show at least 2 points and the asymptote.

2. Solve the system of equations using substitution or elimination: $\begin{cases} x + 2y = 1 \\ 5x - 4y = -23 \end{cases}$

ACT Review:

1. According to the measurements given in the figure below, which of the following expressions gives the distance, in miles, from the boat to the dock?

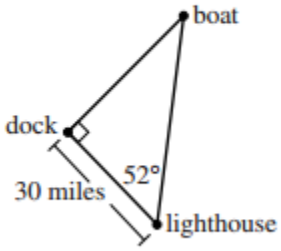
F. 30 tan 52°

G. 30 cos 52°

H. 30 sin 52°

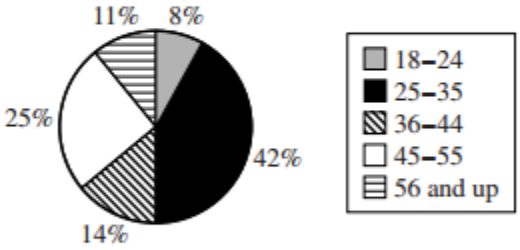
J. $\frac{30}{\cos 52°}$

K. $\frac{30}{\sin 52°}$



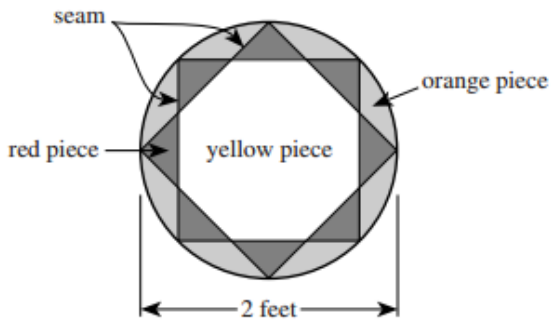
2. The circle graph below shows the distribution of registered voters, by age, for a community. Registered voters are randomly selected from this distribution to be called for jury duty. What are the odds (in the age range:not in the age range) that the first person called for jury duty is in the age range of 25–35 years?

Distribution of Registered Voters by Age



A. 1:3
B. 7:8
C. 7:43
D. 21:29
E. 42:25

The figure below shows the design of a circular stained-glass panel on display at Hopewell's Antique Shop. Seams separate the pieces of the panel. All red triangular pieces shown are congruent and have a common vertex with each adjoining triangular piece. The 2 squares shown are inscribed in the circle. The diameter of the panel is 2 feet.



3. The design of the stained-glass panel has how many lines of symmetry in the plane of the panel?

F. 2
G. 4
H. 8
J. 16
K. Infinitely many

4. What is the area of the stained-glass panel, to the nearest 0.1 square foot?

A. 3.1
B. 4.0
C. 6.2
D. 8.0
E. 12.6

5. Kaya wants to install a new circular stained-glass window in her living room. The design of the window will be identical to that of the panel. The diameter of the new window will be 75% longer than the diameter of the panel. The new window will be how many feet in diameter?

F. 1.50
G. 2.50
H. 2.75
J. 3.50
K. 4.00