LESSON 6-2 CUBE VIEWS

A. D is not possible since the only way to hold it so that we see three faces is if one of them is the top or bottom.

B. Vertices

C.

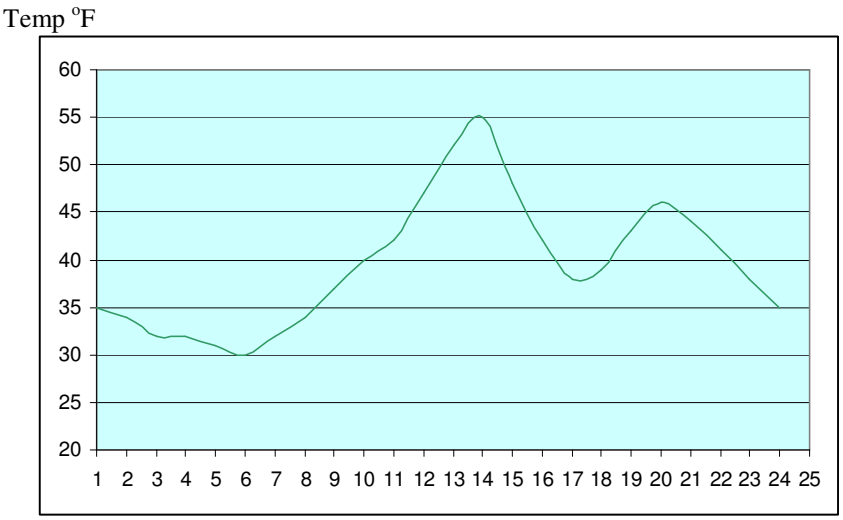
View	Visible			Not visible		
	Edges	Faces	Vertices	Edges	Faces	Vertices
A	4	1	4	8	5	4
B	7	2	6	5	4	2
C	9	3	7	3	3	1

D. Yes, it is always 12

E. Yes, it is always 6

F. Yes, it is always 8

LESSON 6-66 GRAPHING CURVES



A. 30° F B. 55 ° F C. 2 p.m. D. 30 ° F E. 6 a.m.

F. from 6 a.m. to 2 p.m. and from 5 p.m. to 8 p.m.

G. from 1 a.m. to 6 a.m., from 2 p.m. to 5 p.m. and from 8 p.m. to midnight

H. answers may vary but it would be reasonable to answer "around 2 p.m."

LESSON 6-91 SUM OF THE ANGLES IN A TRIANGLE

C. Specific angle measures will vary but, the angles add up to 180 degrees

LESSON 6-93 PLAYING CARDS: COUNTING POINTS

A. 13

B. “Each card has a point value as follows:”

Card	Point value
A	4
K	3
Q	2
J	1
2-10	0

- Legend: A=Ace K=King Q=Queen J=Jack -

C. no

D. 10

E. Sort the cards by rank, putting all cards from 2 to 10 in the same pile. The score will be the number of aces times four plus the number of kings times 3 plus the number of queens times 2 plus the number of jacks.

F. 40. There are 4 + 3 + 2 + 1 = 10 points in each suit so 4 times 10 = 40 total points.

G. 10 points. Each player will, on average, get one ace, one king, one queen, one jack and 9 cards from 2-10.

LESSON 6-114 SOLVING FOR UNKNOWNS

E. 5

F. $x + 7 - 5 + 5 = 12 + 5$

$x + 7 = 17$

G. 7

H. $x + 7 - 7 = 17 - 7$

$x = 10$

I. True

J. $x - 20 + 50 = 50$

$x - 20 + 50 - 50 = 50 - 50$

$x - 20 = 0$

$x - 20 + 20 = 0 + 20$

$x = 20$

K. $x + 240 - 800 = 140$

$x + 240 - 800 + 800 = 140 + 800$

$x + 240 = 940$

$x + 240 - 240 = 940 - 240$

$x = 700$

LESSON 6-133 NETS AND SURFACE AREA

B. “Good! Now flatten out the cube again and trace it on a ShillerMath Graphsheet. Then count up the number of squares it covers as best you can and write your answer here:” _____

C. “What is the surface area for the cube?”

D. “Measure one edge of the cube and put your answer here:” _____

E. “What is the surface area of one side of the cube?” _____

F. 6

G. “What should the surface area be?” _____

H. “How far off was your answer to B?” _____

LESSON 6-145 RATIONAL NUMBERS

A. i, ii, iii, iv, v, vi

B. True, unless the denominator is 0.

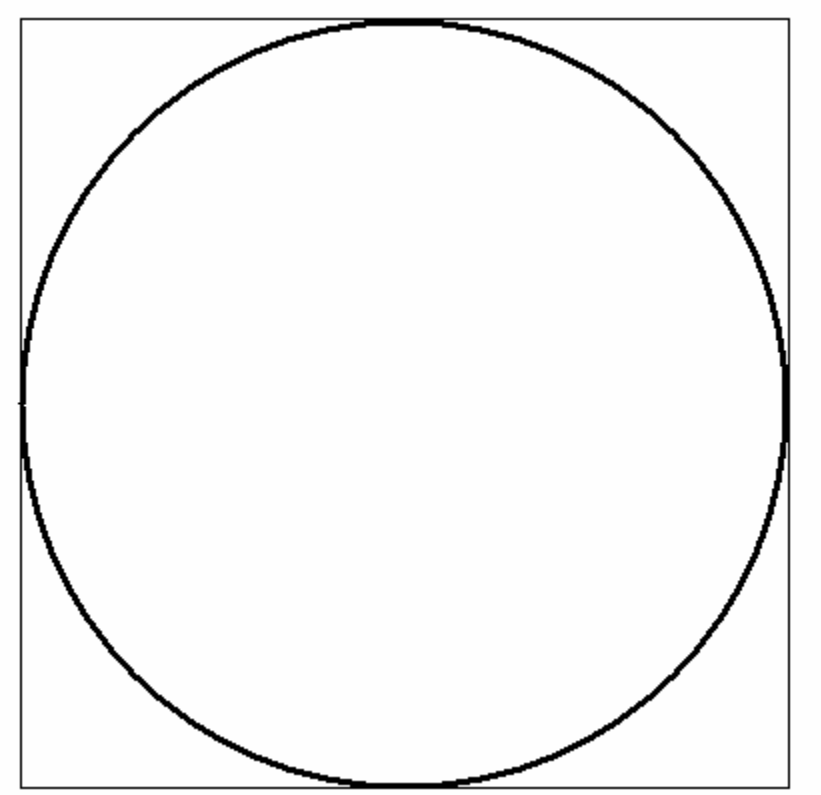
C. True.

LESSON 6-153 AREA OF A CIRCLE

A. the outside edge is curved B. True C. True D. True

E. i. True ii. True iii. True

F.



i. 16 ii. 4π which is about 12.5 iii. the square iv. answers will vary

LESSON 6-159 DEGREES IN A TRIANGLE

A. True since together they form a straight angle

B. True since the other two angles in the triangle are the same size as the two that, together with f, make 180 degrees.

C. True since a + b = 180 and a + f + c = 180

D. True since they must add up to 90 to make 180 degrees with the right angle

E. False, since supplementary angles refers to two angles, not three. However, it is true that the three angles will add up to 180 degrees. □

F. False. If it does, it has one angle more than 90 degrees. That and the right angle add up to more than 180 degrees without having added the third angle yet.