CHAPTER THREE. TRAFFIC.

SET 1. On each of the following days, Sergeant Tiny issued the following traffic tickets. Calculate each of his DAILY and WEEKLY totals.

	MON	TUES	WED	THUR	FRI	SAT	SUN	TOTAL
Park.	$123	$346	$480	$678	$763	$498	$120	$
Speed	$671	$486	$389	$890	$284	$819	$678	
PCA	$870	$985	$835	$932	$678	$342	$356	
Other	$ 78	$ 83	$ 61	$129	$ 94	$ 46	$106	
TOTAL								
Week ONE. WEEKLY TOTAL :								

	MON	TUES	WED	THUR	FRI	SAT	SUN	TOTAL
Park.	$343	$678	$287	$690	$635	$598	$349	$
Speed	$560	$782	$684	$740	$564	$638	$123	
PCA	$913	$753	$472	$952	$578	$892	$646	
Other	$478	$267	$863	$456	$746	$324	$112	
TOTAL								
Week TWO. WEEKLY TOTAL :								

	MON	TUES	WED	THUR	FRI	SAT	SUN	TOTAL
Rego.	$456	$709	$460	$768	$945	$684	$345	$
Park.	$712	$391	$722	$560	$802	$389	$602	
Speed	$695	$648	$899	$346	$704	$744	$892	
PCA	$899	$653	$756	$843	$806	$722	$789	
Other	$243	$156	$403	$124	$224	$336	$426	
TOTAL								
Week THREE. WEEKLY TOTAL :								

SET 2. At the traffic lights of Main St. Toytown, Jennifer stood and recorded the following number plates of the cars that passed.

MONDAY

AC 30	PA 45	TF 66	CV 73	YP 81	HK 99	FE 91
WE 48	EA 23	TG 76	HJ 37	KL 93	DW 35	FF 47
QE 57	FG 85	HJ 21	RJ 65	ML 46	GE 29	DP 63

For the above plates, place a RING around each two digit number that is a multiple of 2.

TUESDAY

WR 24	PT 48	TF 66	HJ 73	PT 81	HK 99	FE 93
WE 40	WW 23	TG 76	HJ 46	KL 78	WY 32	FF 19
QR 60	FG 88	BT 21	KU 15	TO 46	WE 29	US 63

For the above plates, place a RING around each two digit number that is a multiple of 3.

WEDNESDAY

AC 30	PA 45	TF 66	CV 73	YP 81	HK 99	FE 24
WT 48	EF 20	QP 14	HJ 44	KL 93	BY 35	AS 82
QE 89	NM 85	HJ 50	RR 65	MP 46	JM 29	DP 63

For the above plates, place a RING around each two digit number that is a multiple of 4.

THURSDAY

AC 30	PA 45	TF 60	GH 06	MD 42	SZ 28	GG 75
WE 48	EA 23	TG 76	HJ 37	KL 93	DW 35	FF 47
QE 57	FG 85	YU 72	RJ 65	DE 55	QA 13	DP 63

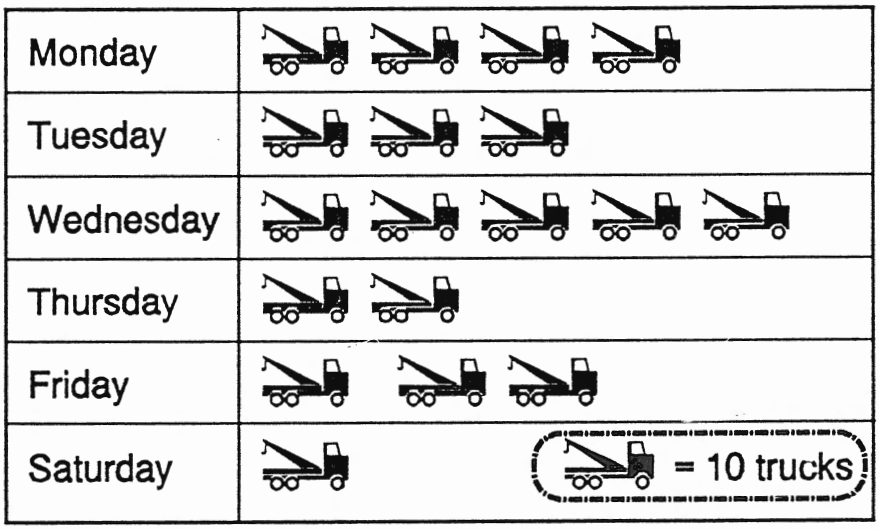
For the above plates, place a RING around each two digit number that is a multiple of 5.

FRIDAY

WQ 36	PO 45	XB 66	CV 73	YP 81	SL 54	FE 14
WE 48	EA 27	TG 76	EE 82	VU 68	DW 23	FF 58
QE 51	FG 42	HJ 60	RT 84	FL 16	HE 66	KP 53

For the plates above, place a RING around each two digit number that is a multiple of 6.

SET 3. Consider the following chart which displays the number of trucks which pass through a set of traffic lights. Then complete the questions.



(a) How many trucks passed on

MONDAY [_____]

TUESDAY [_____]

WEDNESDAY [_____]

THURSDAY [_____]

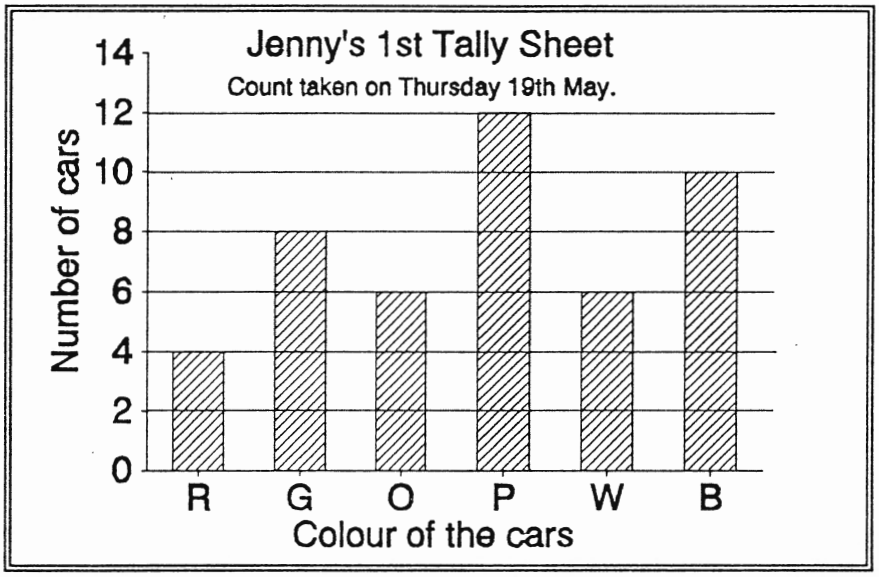
FRIDAY [_____] SATURDAY [_____]

(b) Calculate the total number of trucks in a week. [_____]

(c) Draw trucks to represent

(i) 40 trucks

(ii) 70 trucks



SET 4. In Jennifer's survey, she noted the different colours of the cars that passed by the lights. She recorded her findings on Tally Sheets. Examine the following tally sheet, fill in the tally column and complete the numbers column.

COLOURS	TALLY	No.
Red		
Green		
Orange		
Pink		
White		
Blue		

Write down the

(a) Greatest number [_____]

(b) Least number [_____]

(c) The range of numbers [_____]

(d) The most common colour (mode) [_____]

(e) Calculate the total number of cars [_____]

(f) Which colours have exactly the same numbers ? [_____]

(g) How many more pink cars are there than blue cars? [_____]

(h) How many less red cars than green cars? [_____]

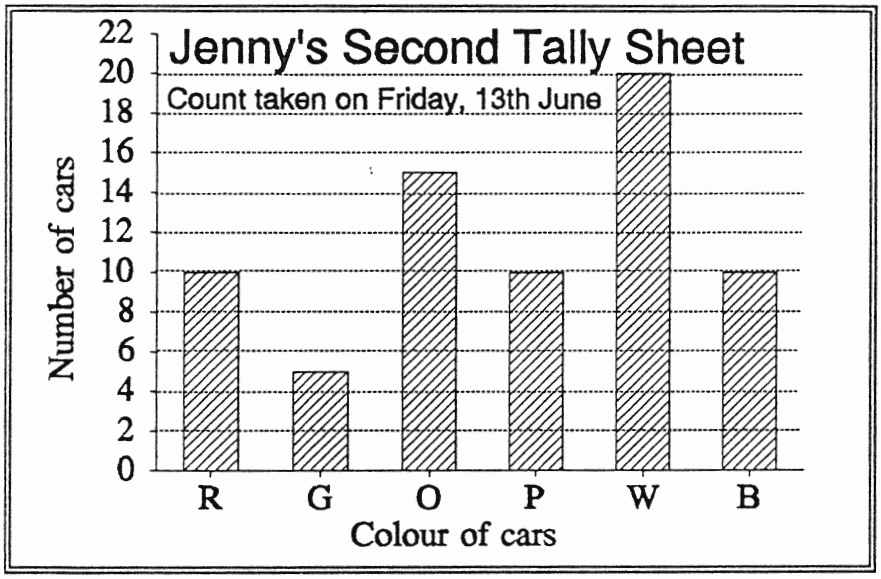
(i) What fraction of all the cars are red ? [_____]

are pink ? [_____]

are blue ? [_____]

SET 5. Calculate the number of cars that passed each of the given intersections.

Intersect.	A	B	C	D	E	F	G	Subtotal
Red	120	130	109	178	134	123	189	
White	60	35	44	56	32	78	98	
Black	205	300	289	497	321	432	213	
Green	409	76	154	273	418	73	304	
Blue	205	206	209	190	247	218	274	
Pink	36	109	56	77	234	88	4	
TOTALS								



SET 6. In Jennifer's survey, she noted the different colours of the cars that passed by the lights. She recorded her findings on Tally Sheets. Examine the following Tally Sheets, fill in the blanks and complete the graphs. Complete her tally table for the day and answer the following questions.

COLOUR	TALLY	No.
Red	_____	_____
Green	_____	_____
Orange	_____	_____
Pink	_____	_____
White	_____	_____
Blue		

(a) Write down the

[1] Greatest number of cars [_____]
[2] Least number of cars [_____]
[3] The range of numbers [_____]
[4] The most common colour [_____]

(b) Calculate the total number of cars [_____]

(c) Which two colours have the same number ? [_____]

(d) Write down the fraction of
red cars ? [_____]
white cars ? [_____]
green cars ? [_____]

(e) The sum of the red and white cars ? [_____]
pink and blue cars ? [_____]
orange and green cars ? [_____]

SET 7. Andrew decided to check some of Jenny's figures by calculating in the reverse direction. Perform the following calculations for Andrew.

a) $\frac{1}{3}$ *of* 18 *cars* = [ ]
b) $\frac{1}{4}$ *of* 24 *cars* = [ ]
c) $\frac{1}{5}$ *of* 30 *cars* = [ ]
d) $\frac{1}{6}$ *of* 60 *cars* = [ ]
e) $\frac{1}{4}$ *of* 64 *cars* = [ ]
f) $\frac{1}{6}$ *of* 69 *cars* = [ ]
g) $\frac{1}{7}$ *of* 35 *cars* = [ ]
h) $\frac{1}{6}$ *of* 126 *cars* = [ ]
i) $\frac{1}{5}$ *of* 80 *cars* = [ ]
j) $\frac{1}{4}$ *of* 180 *cars* = [ ]
k) $\frac{1}{6}$ *of* 96 *cars* = [ ]
l) $\frac{1}{7}$ *of* 154 *cars* = [ ]

SET 8. Calculate the speed of some of the cars that passes by the traffic lights.

CAR	DIST.	TIME	SPEED
AB35	64km	2hr	
MC87	24km	6hr	
CW92	300km	6hr	
QE80	812km	4hr	
PA43	1266km	6hr	
AH34	146km	2hr	
MK51	288km	6hr	
FT93	432km	6hr	
EW56	420km	4hr	
EF77	4812km	4hr	
PA43	4494km	6hr	

CAR	DIST.	TIME	SPEED
WE90	90km	3hr	
HJ83	42km	7hr	
LP53	280km	7hr	
DD90	1023km	3hr	
SP23	1274km	7hr	
WS91	147km	3hr	
KK82	315km	7hr	
XC44	644km	7hr	
PL67	771km	3hr	
OL23	8931km	3hr	
SP23	5782km	7hr	

SET 9. All of the following drivers have been given an ON-THE-STOP fine for speeding. Calculate the Minimum Number of the indicated cash Notes required to "cover" the fine.

Driver	Daniel	Robin	Norah	Colin	Sammy	Sonia	Sunny
Fine	$184	$307	$892	$207	$929	$372	$905
N $ 10							
O							
T $ 5							
E							
S $ 2							

Driver	Donna	Robby	Kelly	Jerry	Bobby	Sunny	Rita
Fine	$235	$789	$507	$455	$237	$632	$814
N $ 10							
O							
T $ 5							
E							
S $ 2							

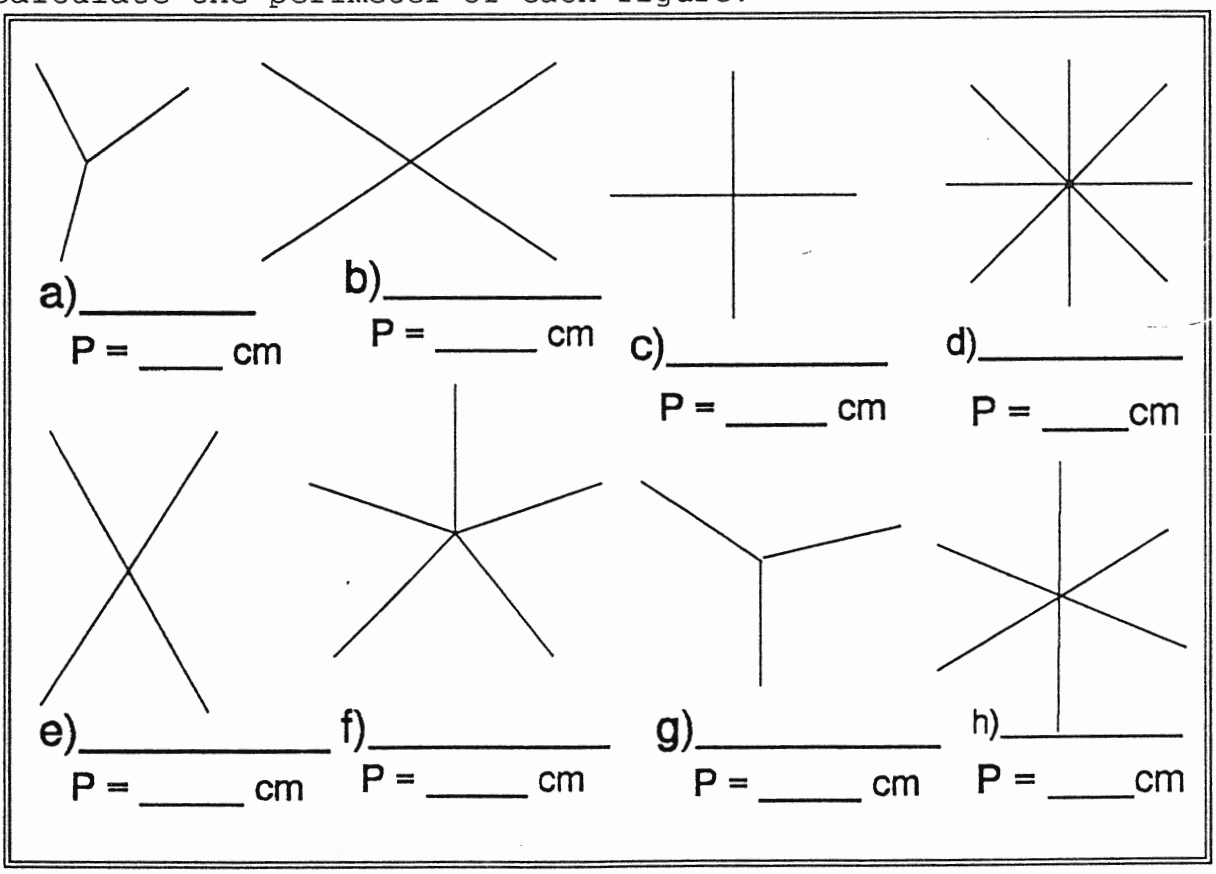
Driver	Sid	Ray	Des	Rex	Joe	Son	Ron
Fine	$184	$307	$892	$207	$929	$372	$905
N $ 10							
O							
T $ 5							
E							
S $ 2							

SET 10. The following careless drivers have been given a number of parking fines. Calculate the total value of the fines and the change (if any) from the given Cash value.

Driver	Donna	Robin	Nita	Mary	Fry	Sand	Reddy
Fine	$36	$112	$174	$204	$164	$198	$163
Number	X 3	X 4	X 5	X 6	X 5	X 3	X 6
Total							
Cash	$150	$500	$900	$1300	$1000	$800	$1100
Change							

Driver	Ruth	Sally	Nita	Adam	Fred	Ron	Sammy
Fine	$234	$382	$244	$318	$319	$238	$672
Number	X 4	X 4	X 5	X 5	X 5	X 6	X 6
Total							
Cash	$1200	$1600	$2500	$1800	$2000	$1500	$4500
Change							

SET 11. Carefully examine the following diagrams of traffic intersections. Join the dots with straight lines using a ruler. You will make squares, rectangles, triangles, pentagon (5-side), hexagon (6-side) and octagon (8-side). Name each figure. Measure the distance of each outside border to the nearest millimetre, Write the measurements on each side and calculate the perimeter of each figure.



SET 12. A parking station charges 7 cents a minute for parking cars. Calculate the bills for the following cars. Complete the Seven Times table first.

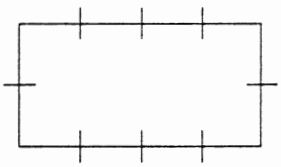
X	2	3	4	5	6	7	8	9	10
7									

CAR	AX45	TO78	WE34	QA92	YY14	LO67	SF90
MINUTES	5	9	7	20	60	40	80
TOTAL							
CAR	TY76	KL83	RT56	QT92	VB57	IU90	KM82
MINUTES	14	19	17	15	23	28	16
TOTAL							
CAR	AX45	TO78	WE34	QA92	YY14	LO67	SF90
MINUTES	24	18	33	41	53	29	64
TOTAL							

SET 13. Examine the following car parks.

(a) Calculate the length of the fence required (i.e. the perimeter).
(b) A car occupies one complete square. By drawing in the smaller squares, calculate the total number of cars that can be parked in each car park.

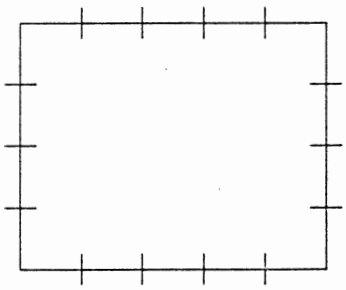
1)



Length = _____

No. of cars = _____

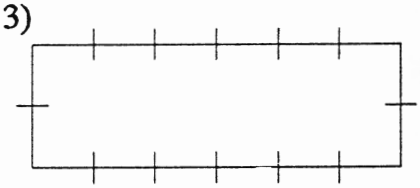
2)



Length = _____

No. of cars = _____

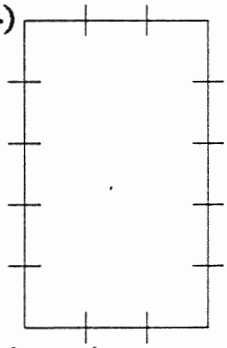
3)



Length = _____

No. of cars = _____

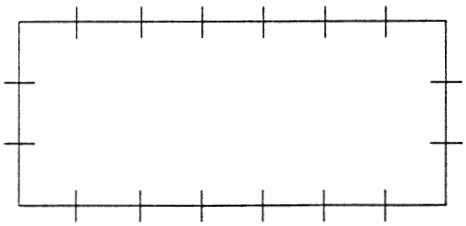
4)



Length = _____

No. of cars = _____

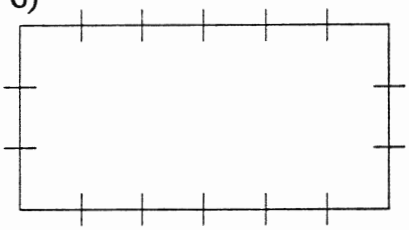
5)



Length = _____

No. of cars = _____

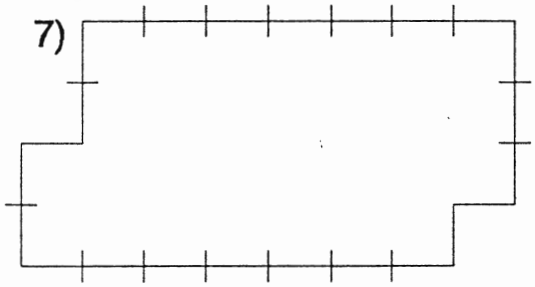
6)



Length = _____

No. of cars = _____

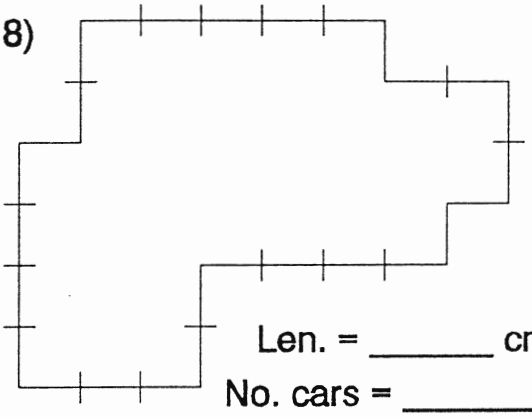
7)



Len. = _____ cm

No. cars = _____

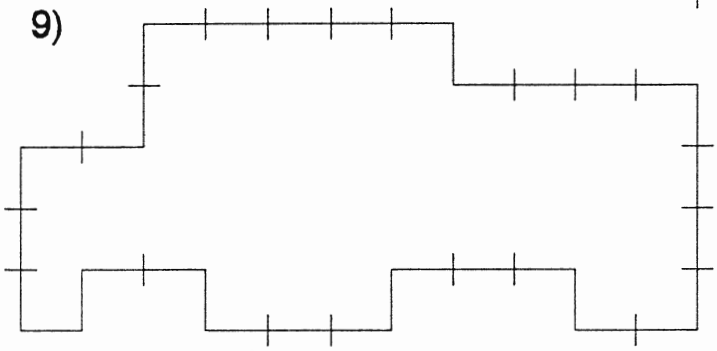
8)



Len. = _____ cm

No. cars = _____

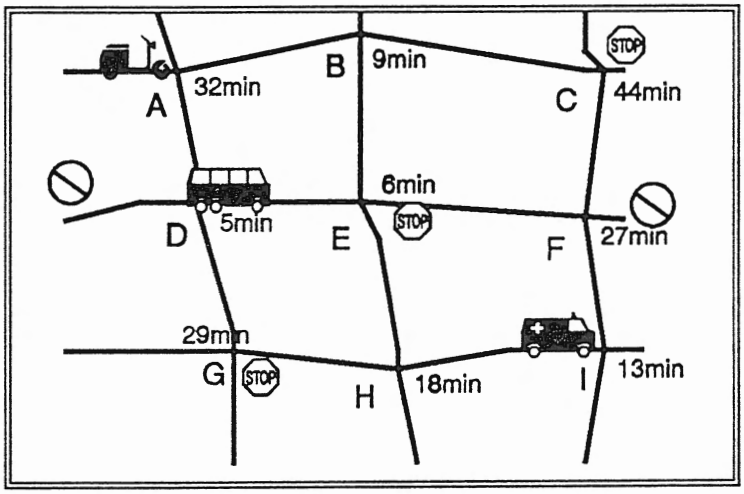
9)



Len. = _____ cm

No. cars = _____

SET 14. Examine the outline of the map of DULLSVILLE. Each intersection is marked with a letter. Because of council rules, there are great time delays at each intersection. The actual times are displayed on the map in minutes.
A taxi continually travels around the town. Calculate the time delay for each of the given journeys.



PATH FOR JOURNEY	TIMES FOR EACH STOP	TOTAL TIME (in mins)	TOTAL TIME (in hrs/mins)
A-B-C			
D-E-F			
G-H-I			
A-D-G-H			
B-E-H-I			
I-F-E-B			
H-G-D-A-B			
F-E-B-C			
B-C-F-E-H			

SET 18. Calculate the speed in seconds at which the following Traffic Lights change colour. The speed is controlled by the sentences following.

1) $\frac{16}{8}$ = [ ]
2) $\frac{14}{7}$ = [ ]
3) $\frac{50}{2}$ = [ ]
4) $\frac{84}{3}$ = [ ]
5) $\frac{65}{5}$ = [ ]
6) $\frac{56}{4}$ = [ ]
7) $\frac{132}{6}$ = [ ]
8) $\frac{279}{9}$ = [ ]
9) $\frac{324}{2}$ = [ ]
10) $\frac{515}{5}$ = [ ]

11) $4 \times 8 - 12$ = [ ]
12) $40 - 3 \times 7$ = [ ]
13) $3 \times 9 - 24$ = [ ]
14) $50 - 4 \times 9$ = [ ]
15) $4 \times 6 - 15$ = [ ]
16) $60 - 7 \times 6$ = [ ]
17) $5 \times 3 - 12$ = [ ]
18) $70 - 8 \times 5$ = [ ]
19) $6 \times 6 - 31$ = [ ]
20) $80 - 9 \times 8$ = [ ]

SET 19. Complete the following practice tables.

(a)

-	90	34	67	81	39	52	43	76
17								
29								
34								

(b)

X	90	34	67	81	39	52	43	76
7								
9								
6								

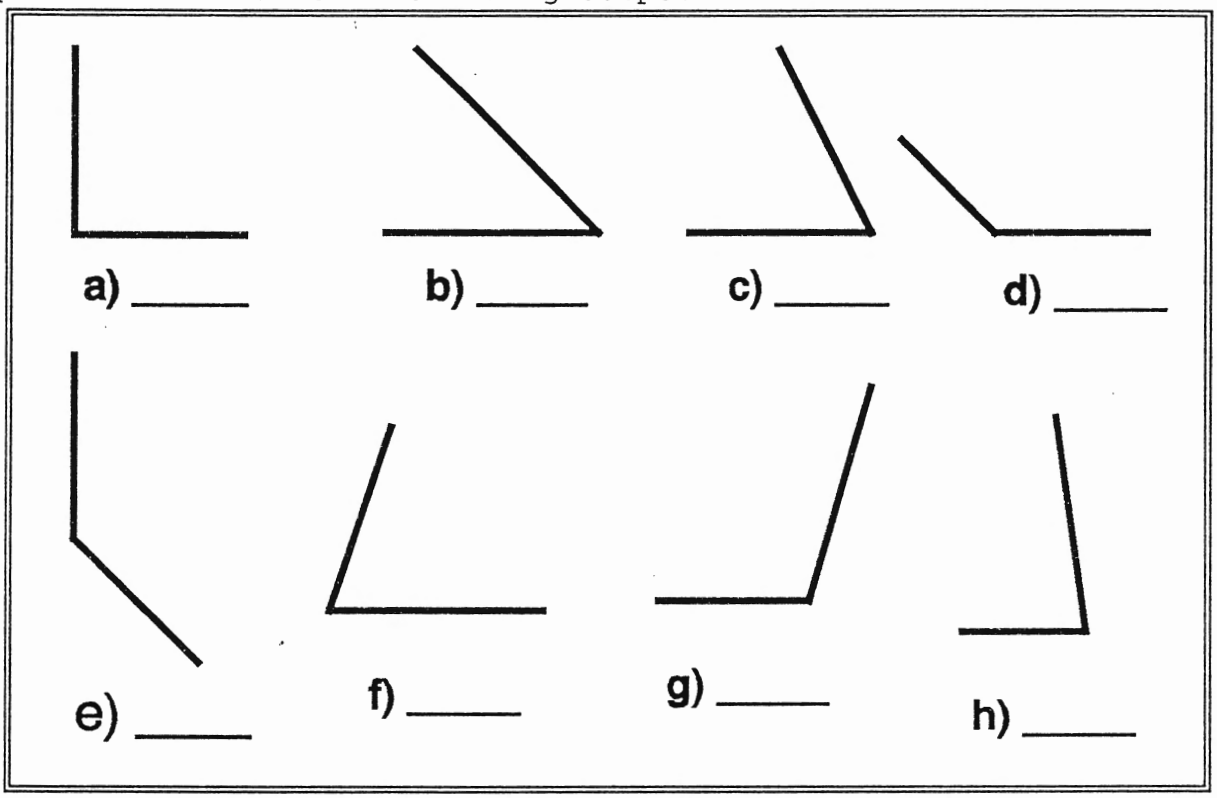
(c)

/	36	90	144	54	108	164	72	126
3								
9								
6								

(d)

SQ.	6	2	8	3	9	5	4	7

SET 20. James, the local engineer has the brilliant idea to make travelling the streets of DULLSVILLE safer. He is going to cover all the man-made holes in the streets with special figures. To let you construct these special figures for James, you must follow the following steps.



(1) Measure the angles above using a protractor.

(2) Using the baselines below, draw the following angles.

_____ _____ _____ _____

a) 60° b) 45° c) 30° d) 75°

_____ _____ _____ _____

e) 20° f) 105° g) 22° h) 54°

(3) Draw a fence of circles, all the same size, across this section of the page. Be neat and tidy.

SET 18. Calculate the speed in seconds at which the following Traffic Lights change colour. The speed is controlled by the sentences following.

1) $\frac{16}{8}$ = [ ]
2) $\frac{14}{7}$ = [ ]
3) $\frac{50}{2}$ = [ ]
4) $\frac{84}{3}$ = [ ]
5) $\frac{65}{5}$ = [ ]
6) $\frac{56}{4}$ = [ ]
7) $\frac{132}{6}$ = [ ]
8) $\frac{279}{9}$ = [ ]
9) $\frac{324}{2}$ = [ ]
10) $\frac{515}{5}$ = [ ]

11) $4 \times 8 - 12$ = [ ]
12) $40 - 3 \times 7$ = [ ]
13) $3 \times 9 - 24$ = [ ]
14) $50 - 4 \times 9$ = [ ]
15) $4 \times 6 - 15$ = [ ]
16) $60 - 7 \times 6$ = [ ]
17) $5 \times 3 - 12$ = [ ]
18) $70 - 8 \times 5$ = [ ]
19) $6 \times 6 - 31$ = [ ]
20) $80 - 9 \times 8$ = [ ]

SET 19. Complete the following practice tables.

(a)

-	90	34	67	81	39	52	43	76
17								
29								
34								

(b)

X	90	34	67	81	39	52	43	76
7								
9								
6								

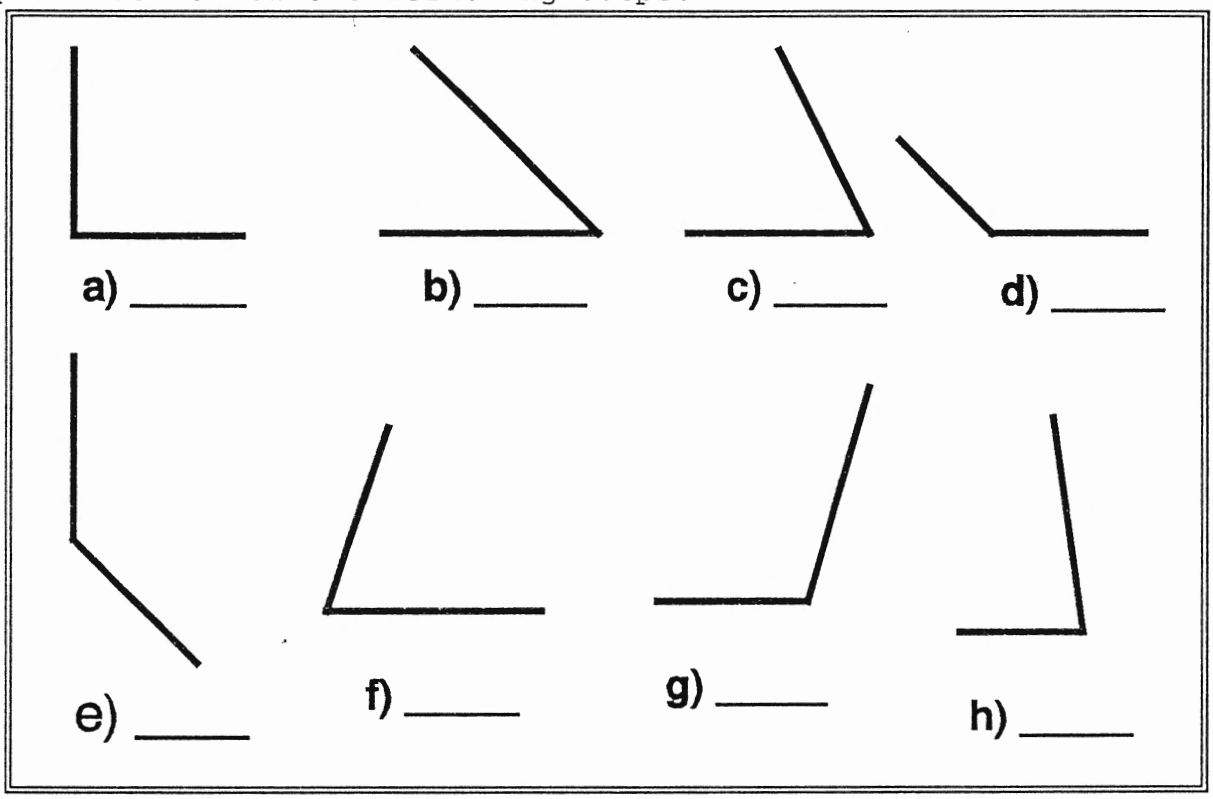
(c)

/	36	90	144	54	108	164	72	126
3								
9								
6								

(d)

SQ.	6	2	8	3	9	5	4	7

SET 20. James, the local engineer has the brilliant idea to make travelling the streets of DULLSVILLE safer. He is going to cover all the man-made holes in the streets with special figures. To let you construct these special figures for James, you must follow the following steps.



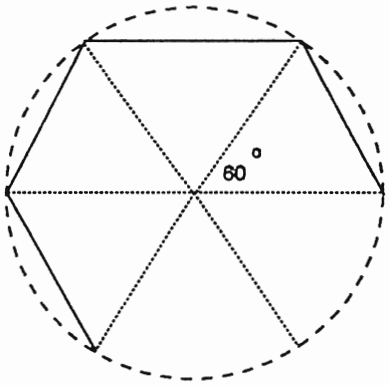
(1) Measure the angles above using a protractor.

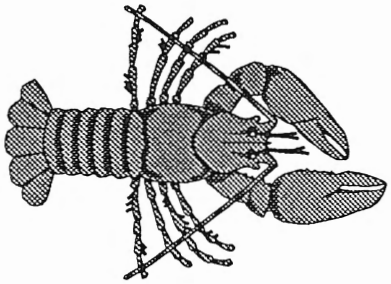
(2) Using the baselines below, draw the following angles.

a) 60°	b) 45°	c) 30°	d) 75°
e) 20°	f) 105°	g) 22°	h) 54°

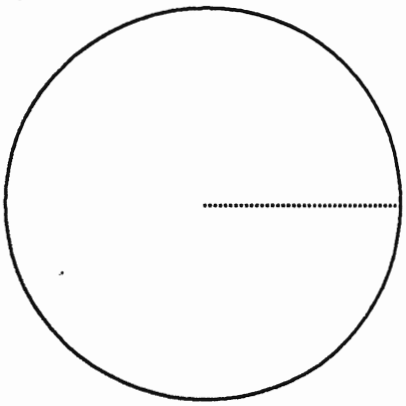
(3) Draw a fence of circles, all the same size, across this section of the page. Be neat and tidy.

(4) Complete the hexagon opposite. Using a compass and protractor, copy this hexagon onto cardboard. Cut the shape out.

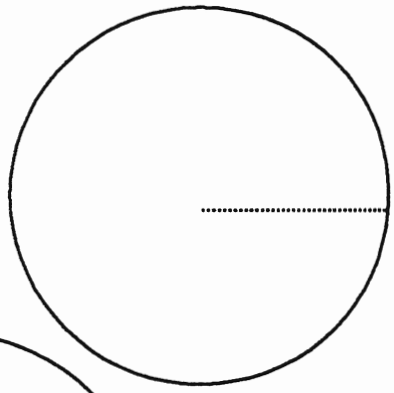




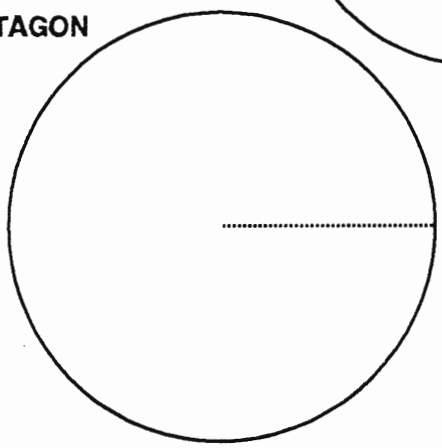
a) Angle 72 deg. PENTAGON



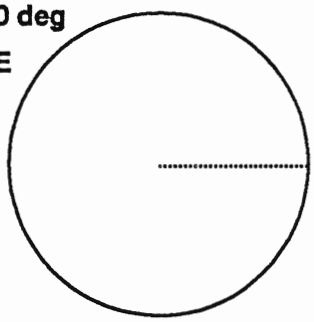
b) Angle 60 deg. HEXAGON



d) Angle 60 deg OCTAGON



c) Angle 90 deg SQUARE



(5) Complete the shapes above using compasses, protractor and pencil.

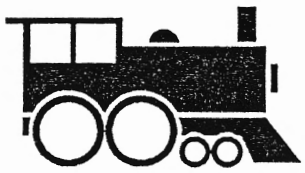
(6) Double the size and reproduce the shapes (in step 4) on cardboard. Label each shape correctly and fix them onto a sheet of paper.

SET 21. Given the following codes which combine to control various traffic lights. Combine the codes by subtraction to determine the time delay (in minutes) that the arrangement creates.

```
**********************************************************
*  A = 35 mins  B = 27 mins  C = 64 mins  D = 46 mins *
*  E = 58 mins  F = 71 mins  G = 25 mins  H = 19 mins *
**********************************************************
```

-	A	B	C	D	E	F
G						
H						

SET 22. By calculating the following "secret formulae" , complete the number plates of the taxis in DULLSVILLE.



1) 3 + 5 x 6 = [*ABC*]
2) 8 x 3 - 21 = [*YTH*]
3) 14 + 9 x 7 = [*GOP*]
4) 7 x 7 - 35 = [*WER*]
5) 68 - 6 x 7 = [*YOU*]
6) 21 x 3 - 23 = [*DER*]
7) 90 + 3 X 8 = [*ASE*]
8) 9 x 7 - 36 = [*DUY*]
9) 72 - 7 x 4 = [*ZXX*]
10) 8 x 6 + 49 = [*UKK*]
11) (2 x 7) + (3 x 6) = [*AWE*]
12) (7 x 2) - (3 x 4) = [*QOU*]
13) (9 x 5) - (4 x 6) = [*ERT*]
14) (8 x 7) + (6 x 3) = [*OOP*]
15) (7 x 4) - (6 x 2) = [*SXZ*]
16) (6 x 8) + (7 x 3) = [*REX*]
17) (7 x 5) - (3 x 10) = [*JOH*]
18) (4 x 7) + (7 x 5) = [*ERA*]

SET 23. Fill in this progressive table which shows the number of passengers on three DULLSVILLE trains.

TRAIN	CITY EXPRESS	STREAM TWO	GREY FLASH
No. in Train	1400	1350	1540
No. getting on	456	765	234
Total 1			
No. getting off	905	604	780
Total 2			
No. getting on	1234	896	933
Total 3			
No. getting off	1098	1123	965
Total 4			
No. getting on	456	942	393
Total 5			