

Essential Skills Wales

Essential Application of Number Skills (EAoNS)

Level 3 Controlled Task

Candidate Pack

Community Safety

Version 2.3

Sample (Set B)

Instructions

- Fill in the candidate information boxes below.
- Complete **all** parts of the task.
- Sign and date the declaration on the next page when you have completed the task.

Candidate name:
Candidate number:
Date registered for EAoNS:
Unique Learner Number (ULN) (<i>if applicable</i>):
Centre name or number:

You have up to **8 hours in total** to complete this controlled task.

The total time can be split over a number of sessions.

Details of when each session started and ended **must** be recorded below:

Date controlled task started :							
Date controlled task completed (<i>no more than eight weeks later</i>):							
Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8
	<i>Date</i>	<i>Date</i>	<i>Date</i>	<i>Date</i>	<i>Date</i>	<i>Date</i>	<i>Date</i>
<i>Duration</i>	<i>Duration</i>	<i>Duration</i>	<i>Duration</i>	<i>Duration</i>	<i>Duration</i>	<i>Duration</i>	<i>Duration</i>
Total time spent:				Supervisor signature:			

If more than eight sessions are required, any further dates/durations should be recorded on a separate sheet.

Produced jointly by the four Essential Skills awarding bodies:

Agored Cymru
City & Guilds
Pearson
WJEC



This task pack contains a scenario, a set of instructions and source material.

- Read the scenario, instructions and source material carefully before you start.
- You will be supervised throughout your time working on this task.
- You can use most of the equipment normally available to you in a real-life situation, including internet access.
- All work submitted must be **entirely** your own. You are not allowed any help with the skills that are being assessed through this controlled task.
- Hand in all of your work at the end of **each** session. You are not allowed to take any task materials away with you, or have access to these between sessions.
- Sign and date the declaration below when you have completed the task.

Candidate declaration

I confirm that this controlled task is entirely my own work and it was completed during the supervised sessions stated on the front page.

Candidate signature: _____ Date: _____

Task instructions: Community Safety

What you need to find out

Scenario

You work for a Community Safety organisation. Your manager has asked you to help prepare a report for a Neighbourhood Watch group.

The aims of this task are to:

- recommend a security camera to meet the requirements of the Neighbourhood Watch group
- make detailed comparisons of crime statistics for Cardiff and North Wales
- prepare a brief report on your findings for the local Neighbourhood Watch group.

Use the sources provided.

What you need to do

Part 1

Read through the task and source materials.

Make a structured plan to show how you will do this task.

You must include:

- the information you will use from the source materials
- which calculations you choose to do, from a range of possible calculations
- a justification for your choice of **at least two** of your methods
- how you will present the results for Part 2 and Part 3.

(Total for Part 1: 4 marks)

In **Part 2 and Part 3**, you must:

- show all the calculations you do. If you use a calculator, make a note of what you put into the calculator. If you use a spreadsheet, make a note of the numbers and the formulas you use
- give your answers to a suitable level of accuracy.

Remember to check your calculations.

Part 2

The Neighbourhood Watch group wants to install a security camera to help reduce anti-social behaviour (ASB).

You must:

- calculate the required effective range of a suitable camera
- recommend which camera the Neighbourhood Watch group should install and give **at least one** reason.

Your manager wants to use pie charts to compare the proportions of different types of crime in Cardiff and North Wales. She has a suitable pie chart for Cardiff, and she needs to produce one for North Wales.

You must:

- calculate the radius of a pie chart to show the proportions of different types of crime in North Wales in December 2019.

Note: You do **not** need to draw the pie chart.

Remember to check your calculations.

(Total for Part 2: 10 marks)

Part 3

You need to compare crime statistics in Cardiff and North Wales.

You must:

- calculate and compare the total number of crimes per 1000 people in Cardiff and North Wales in January 2016 and in December 2019
- present your findings in a suitable way
- compare your results and make **at least one** detailed comment on your findings.

You must:

- do separate calculations to find the monthly average number of incidents of anti-social behaviour in Cardiff and in North Wales in **each** of the following years:
 - 2016
 - 2017
 - 2018
 - 2019
- calculate the percentage change in the monthly average number of incidents of anti-social behaviour between 2016 and 2019 in Cardiff and in North Wales
- present your findings in a suitable way. Use a different method to the one you used before.
- compare your results and make **at least one** detailed comment on your findings.

You need to consider your answers for Part 2 and Part 3.

You must

- justify your methods of presentation
- comment on how any possible sources of error may have affected your results.

Remember to check your calculations.

(Total for Part 3: 19 marks)

Sources you should use

Source 1

- Diagram – security camera requirements

Source 2

- Table – security cameras

Source 3

- Chart – crimes in Cardiff, December 2019

Source 4

- Formula – radius of a pie chart

Source 5

- Table – crimes in Cardiff: January 2016 to December 2019

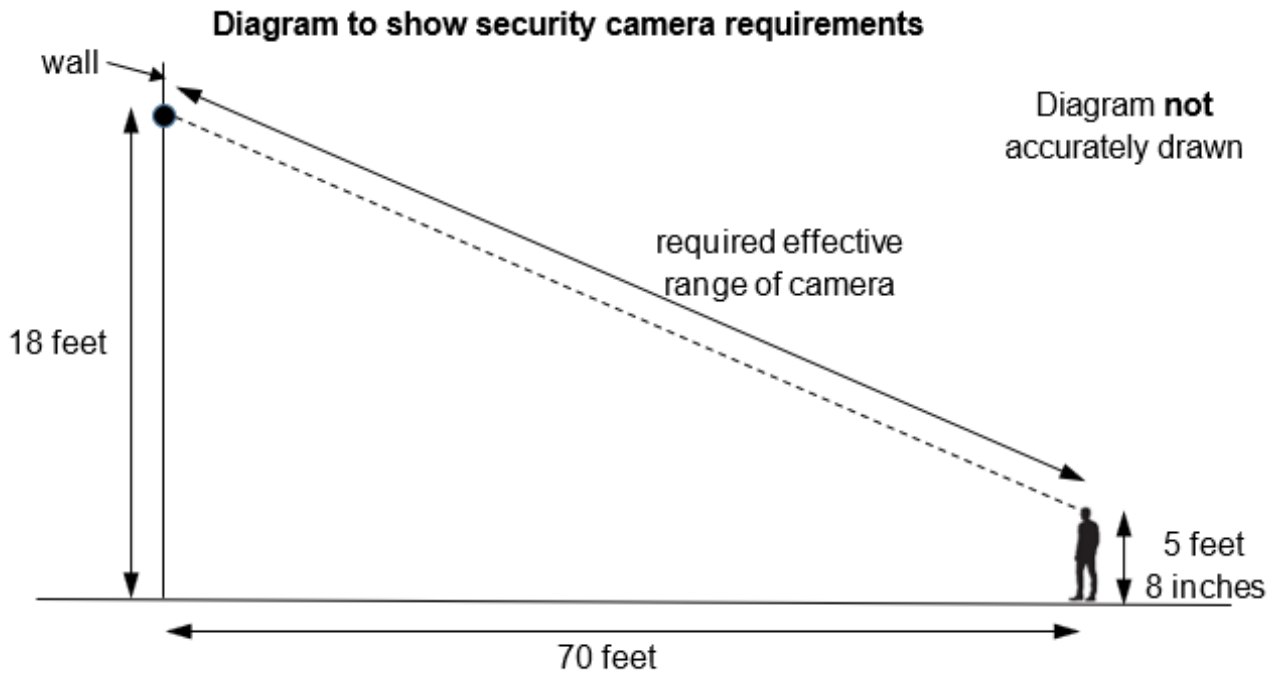
Source 6

- Table – crimes in North Wales: January 2016 to December 2019

Source 1 Diagram – security camera requirements

The security camera must:

- be installed on the wall of a building at a height of 18 feet
- have enough effective range to allow identification of a person of average height at a horizontal distance of 70 feet from the building



Human figure © Pearson Asset Library

Conversion factors to use:

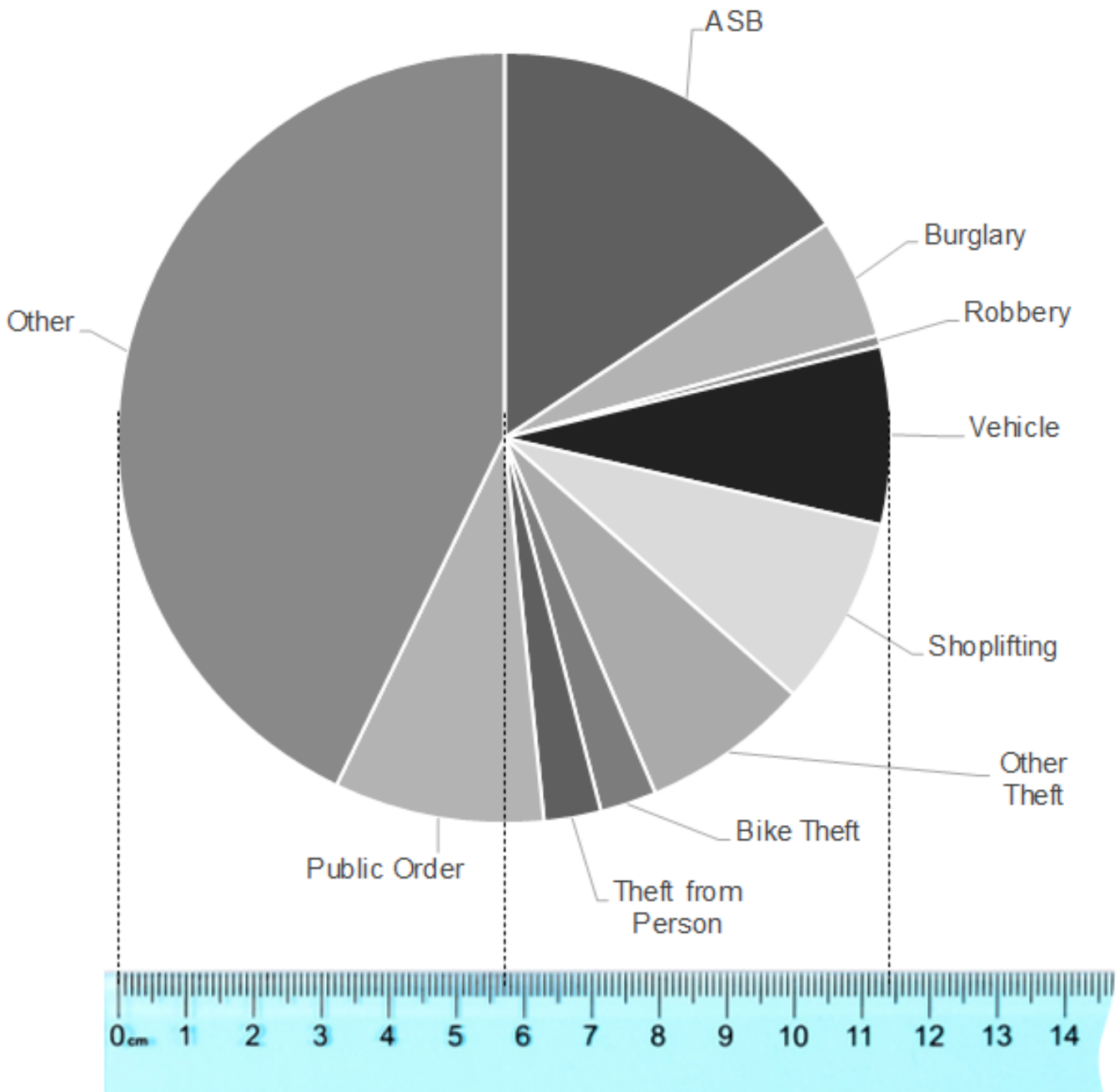
1 foot = 0.3 metres
 1 foot = 12 inches
 1 inch = 2.5 cm

Source 2 Table – security cameras

Camera model	Lens	Effective range (m)	Cost (£)
B3	3.6 mm	5	64.95
C8	8 mm	11	64.95
D9	12 mm	9	49.95
S7	6 mm – 22 mm	25	119.95
T6	2.8 mm – 16 mm	20	99.95
T8	5 mm – 50 mm	70	169.95

Source 3 Chart – crimes in Cardiff, December 2019

Crimes in Cardiff, December 2019



Source 4 – Formula – radius of a pie chart

If two or more pie charts are to be compared, the areas of the pie charts must be proportional to the total numbers they represent.

Use the formula to find the radius of a pie chart for crimes in North Wales.

$$\frac{\pi R^2}{\pi r^2} = \frac{T}{t}$$

where

R = Radius of pie chart for Cardiff

r = radius of pie chart for North Wales

T = Total crimes in Cardiff

t = total crimes in North Wales

Source 5 Table – Crimes in Cardiff: January 2016 to December 2019 (Page 1 of 2)

Population of Cardiff, January 2016 to December 2019 (estimate): 345 624

Month	Anti-Social Behaviour	Burglary	Robbery	Vehicle	Shoplifting	Other Theft	Bike Theft	Theft from Person	Public Order	Other	Total
Dec-19	577	187	17	275	293	260	87	88	324	1580	3 688
Nov-19	674	191	13	285	331	312	107	47	330	1479	3 769
Oct-19	845	179	32	242	270	279	137	55	395	1714	4 148
Sep-19	799	231	31	251	334	286	125	43	343	1612	4 055
Aug-19	833	155	25	252	315	257	153	39	359	1586	3 974
Jul-19	956	180	21	222	329	280	178	59	398	1670	4 293
Jun-19	793	179	26	293	367	264	137	41	363	1636	4 099
May-19	844	201	28	311	418	334	112	41	357	1648	4 294
Apr-19	738	205	19	263	391	316	92	62	316	1505	3 907
Mar-19	728	149	14	285	446	303	82	48	353	1515	3 923
Feb-19	815	175	17	300	392	254	91	79	315	1630	4 068
Jan-19	726	202	18	393	460	307	89	37	252	1605	4 089
Dec-18	646	187	17	277	363	298	70	41	305	1503	3 707
Nov-18	774	201	26	282	481	337	106	58	262	1673	4 200
Oct-18	947	230	27	318	409	358	167	54	315	1605	4 430
Sep-18	866	185	27	281	386	308	178	34	293	1501	4 059
Aug-18	927	221	18	293	405	329	126	43	309	1545	4 216
Jul-18	1112	229	27	233	390	364	214	48	394	1683	4 694
Jun-18	1006	264	28	248	352	311	154	41	367	1564	4 335
May-18	969	227	13	217	404	304	129	37	315	1543	4 158
Apr-18	885	181	9	271	388	306	83	45	283	1413	3 864
Mar-18	809	189	9	287	349	249	64	44	285	1428	3 713
Feb-18	773	183	19	320	382	287	63	60	212	1310	3 609
Jan-18	847	227	40	317	360	283	107	31	250	1393	3 855

Source 5 Table – Crimes in Cardiff: January 2016 to December 2019 (Page 2 of 2)

Month	Anti-Social Behaviour	Burglary	Robbery	Vehicle	Shoplifting	Other Theft	Bike Theft	Theft from Person	Public Order	Other	Total
Dec-17	755	268	17	451	329	288	72	64	277	1375	3896
Nov-17	973	303	28	419	435	307	160	96	259	1558	4538
Oct-17	1125	251	29	420	416	309	146	50	302	1539	4587
Sep-17	950	222	23	280	411	310	122	43	280	1330	3971
Aug-17	1073	235	14	372	434	328	166	40	287	1316	4265
Jul-17	1113	206	22	322	402	320	153	76	302	1416	4332
Jun-17	1186	216	19	215	366	343	119	89	254	1351	4158
May-17	1113	277	18	274	374	300	110	47	305	1370	4188
Apr-17	1142	201	21	291	349	282	127	56	249	1332	4050
Mar-17	992	263	22	426	331	326	133	60	208	1422	4183
Feb-17	890	241	18	436	330	321	117	47	212	1245	3857
Jan-17	718	230	20	321	373	285	107	77	209	1379	3719
Dec-16	882	185	19	415	366	292	88	69	230	1242	3788
Nov-16	878	237	13	441	338	343	164	51	260	1438	4163
Oct-16	1146	204	12	321	313	294	158	62	289	1364	4163
Sep-16	1063	209	16	228	331	355	153	34	237	1257	3883
Aug-16	1182	207	20	242	336	350	151	39	232	1319	4078
Jul-16	1069	249	12	311	320	328	126	53	243	1349	4060
Jun-16	901	257	12	258	284	337	123	59	270	1255	3756
May-16	951	251	16	272	296	337	119	65	267	1310	3884
Apr-16	828	210	12	300	348	310	102	38	210	1281	3639
Mar-16	856	253	12	359	327	261	84	60	235	1268	3715
Feb-16	845	193	12	334	313	291	79	85	156	1150	3458
Jan-16	800	243	11	351	264	323	90	77	141	1147	3447

Source: ukcrimestats.com

Source 6 Table – Crimes in North Wales: January 2016 to December 2019 (Page 1 of 2)

Population of North Wales, Estimate for January 2016 to December 2019: 687 042

Month	Anti-Social Behaviour	Burglary	Robbery	Vehicle	Shoplifting	Other Theft	Bike Theft	Theft from Person	Public Order	Other	Total
Dec-19	1039	253	17	155	261	355	33	15	359	3 014	5 501
Nov-19	1148	292	22	121	323	370	17	19	418	3 074	5 804
Oct-19	1369	240	23	145	302	388	31	17	504	3 096	6 115
Sep-19	1316	281	7	144	356	400	31	23	488	2 930	5 976
Aug-19	1286	295	22	180	414	478	45	21	551	3 321	6 613
Jul-19	1355	293	10	150	370	476	40	22	502	3 228	6 446
Jun-19	1145	280	16	149	340	425	44	20	461	3 125	6 005
May-19	1167	290	27	190	367	402	46	28	560	3 210	6 287
Apr-19	1086	297	18	209	379	420	53	18	532	3 399	6 411
Mar-19	993	323	19	151	442	401	37	20	493	3 192	6 071
Feb-19	1037	258	14	136	370	294	24	9	441	2 928	5 511
Jan-19	1015	276	14	157	284	388	25	14	407	3 092	5 672
Dec-18	972	300	16	183	284	361	31	20	431	2 939	5 537
Nov-18	1070	347	19	212	343	365	42	19	428	2 877	5 722
Oct-18	1180	352	19	244	392	418	59	9	450	3 039	6 162
Sep-18	1116	314	16	188	341	399	82	18	432	2 976	5 882
Aug-18	1337	322	22	182	354	457	71	17	380	2 963	6 105
Jul-18	1516	322	13	176	364	464	56	19	449	3 220	6 599
Jun-18	1367	300	24	169	345	433	43	24	408	3 072	6 185
May-18	1282	312	12	152	354	457	36	25	412	3 061	6 103
Apr-18	1226	297	21	156	399	429	41	15	385	2 828	5 797
Mar-18	1184	306	18	186	296	364	33	14	365	3 022	5 788
Feb-18	1007	272	16	131	296	391	18	6	290	2 331	4 758
Jan-18	1117	317	12	159	348	366	21	12	246	2 520	5 118

Source 6 Table – Crimes in North Wales: January 2016 to December 2019 (Page 2 of 2)

Month	Anti-Social Behaviour	Burglary	Robbery	Vehicle	Shoplifting	Other Theft	Bike Theft	Theft from Person	Public Order	Other	Total
Dec-17	1201	280	17	129	281	349	28	21	237	2 622	5 165
Nov-17	1331	363	15	149	412	384	37	21	243	2,512	5 467
Oct-17	1360	326	12	179	344	421	50	27	249	2 748	5 716
Sep-17	1367	283	9	118	368	419	50	27	212	2 499	5 352
Aug-17	1573	299	16	201	394	528	61	25	253	2 617	5 967
Jul-17	1611	322	15	165	335	445	76	31	196	2 792	5 988
Jun-17	1662	301	18	197	357	438	60	27	176	2 468	5 704
May-17	1742	307	25	193	372	444	49	25	138	2 402	5 697
Apr-17	1639	299	14	171	292	398	33	44	129	2 289	5 308
Mar-17	1511	347	19	165	340	368	37	19	122	2 085	5 013
Feb-17	1277	282	13	157	315	287	35	20	86	1 772	4 244
Jan-17	1303	281	11	230	339	328	30	19	96	1 831	4 468
Dec-16	1327	309	12	171	306	273	24	18	118	2 024	4 582
Nov-16	1268	291	14	146	293	356	36	22	111	1 894	4 431
Oct-16	1619	257	10	168	299	329	45	10	114	1 960	4 811
Sep-16	1525	278	11	160	355	395	54	10	124	1 864	4 776
Aug-16	1684	278	9	170	368	482	65	21	111	2 019	5 207
Jul-16	1543	254	12	117	319	424	40	18	144	1 982	4 853
Jun-16	1624	230	3	166	295	401	40	15	154	1 988	4 916
May-16	2142	253	8	173	355	408	29	19	143	2 075	5 605
Apr-16	1908	304	15	143	368	429	28	12	137	2 023	5 367
Mar-16	1946	294	22	168	326	408	31	14	137	2 037	5 383
Feb-16	1499	262	8	134	286	315	23	13	123	1 857	4 520
Jan-16	1568	283	15	152	264	337	27	12	92	1 710	4 460

Source: ukcrimestats.com