



Yr Adran Fathemateg

10

Mesur

Siapiau 3

Haen Sylfaenol

Fersiwn

3.0

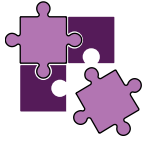
08/2025

Enw:

## Cynnwys

| Pennod                                           | Mathemateg                                                                                          | Rhif y Dudalen |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------|
| <b>Trawsfurfiadau: Helaethiad</b>                | Ffactor graddfa bositif. Ffactor graddfa ffracsiynol. Canol helaethiad. Darganfod canol helaethiad. | 3              |
| <b>Perimedr ac Arwynebedd Siapiau Cyfansawdd</b> | Siapiau cyfansawdd.                                                                                 | 7              |





## Helaethiad



Mae **helaethiad** yn un o'r pedwar trawsffurfiad.

| Blwyddyn 7  | Blwyddyn 8 | Blwyddyn 9   | Blwyddyn 10 |
|-------------|------------|--------------|-------------|
| Trawsfudiad | Cylchdro   | Adlewyrchiad | Helaethiad  |

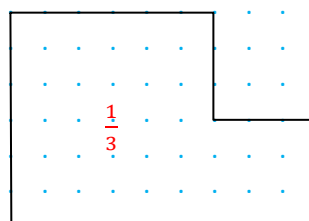
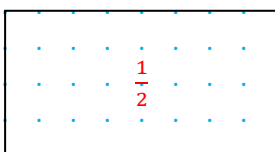
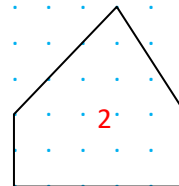
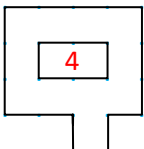
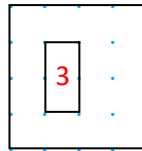
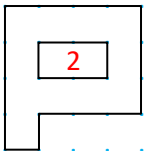
Pan fo siâp yn cael ei helaethu, mae **maint** y siâp yn newid. Y **ffactor graddfa** sy'n rheoli sut mae'r maint yn newid. Er enghraifft, os yw'r ffactor graddfa'n 2, yna bydd maint y siâp yn dyblu. Os yw'r ffactor graddfa'n  $\frac{1}{2}$ , yna bydd maint y siâp yn haneru.

### Ymarfer 1

Helaethwch y siapiau canlynol gan ddefnyddio'r ffactor graddfa yng nghanol bob siâp.

Sgîl

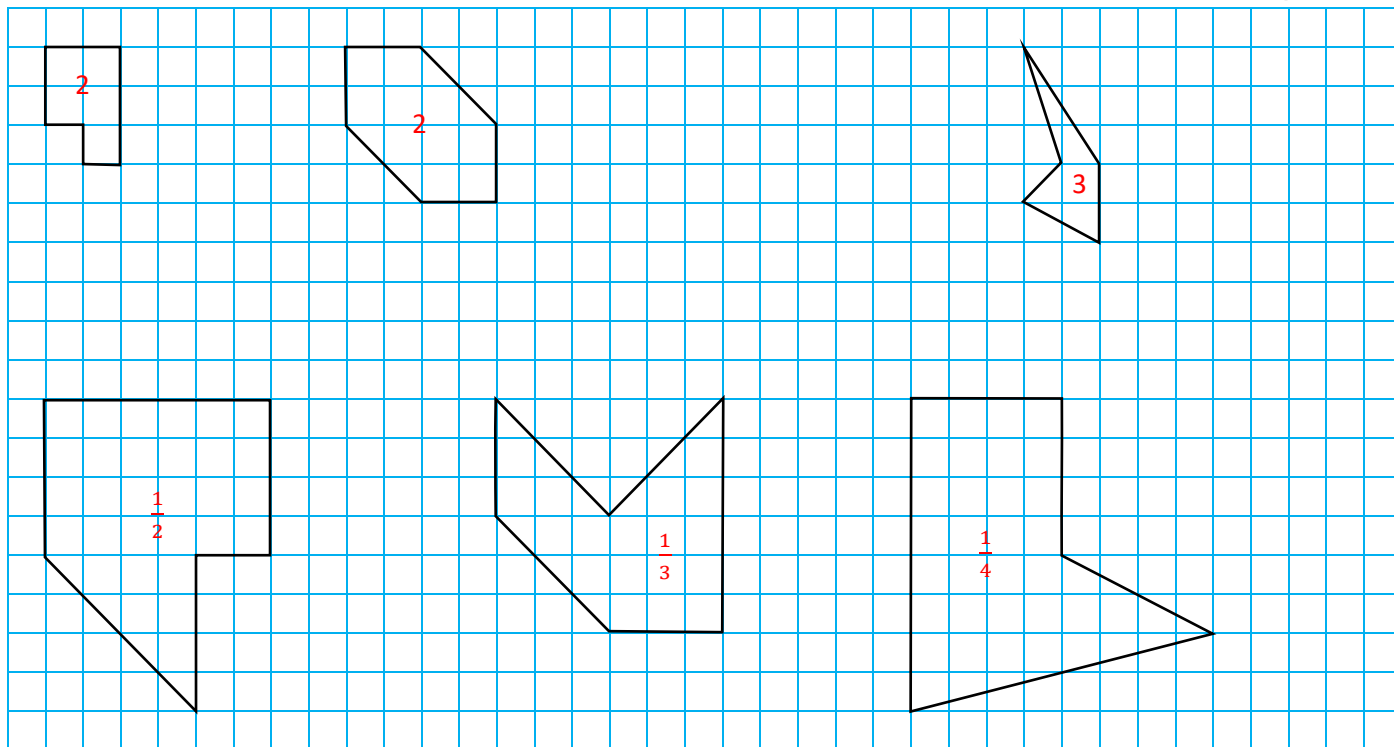
2



## Ymarfer 2



Helaethwch y siapiau canlynol gan ddefnyddio'r ffactor graddfa yng nghanol bob siâp.



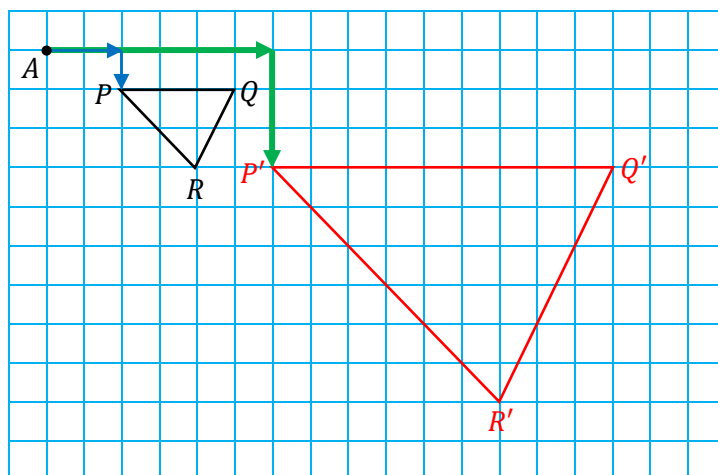
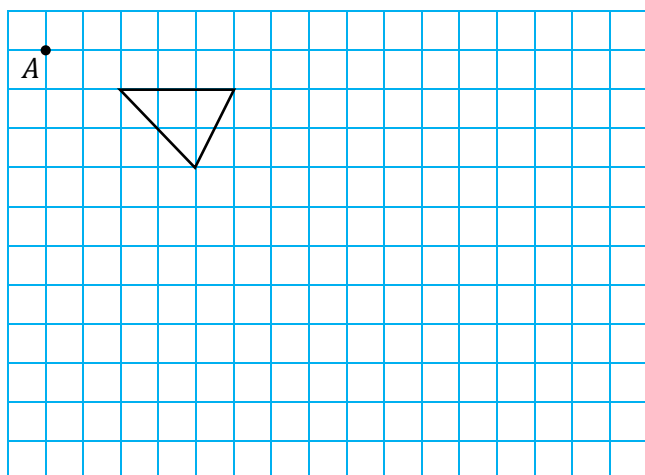
## Canol Helaethiad

Os yw cwestiwn yn nodi pwynt fel **canol yr helaethiad**, yna mae'n rhaid i'r helaethiad ymddangos mewn lleoliad penodol (ni chaiff ymddangos yn rhywle fel yn ymarferion 11 ag 12).

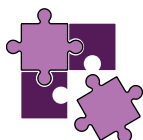


## Enghraifft

Helaethwch y triongl isod gan ddefnyddio ffactor graddfa 3 a'r pwynt A fel canol yr helaethiad.

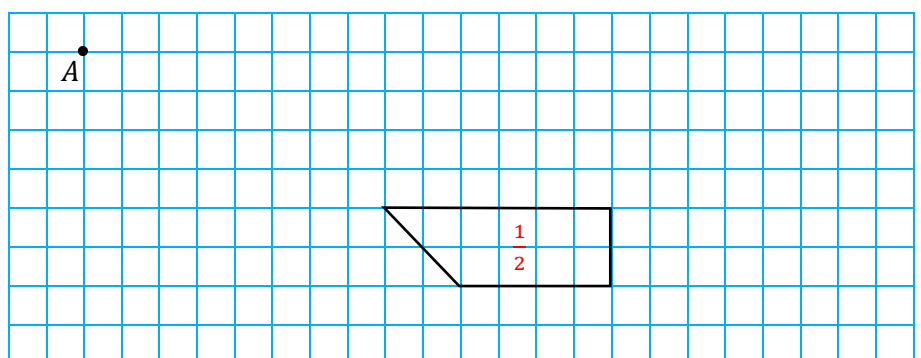
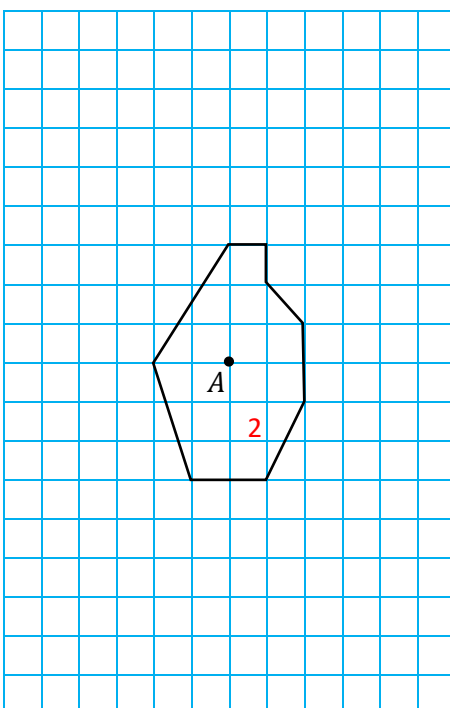
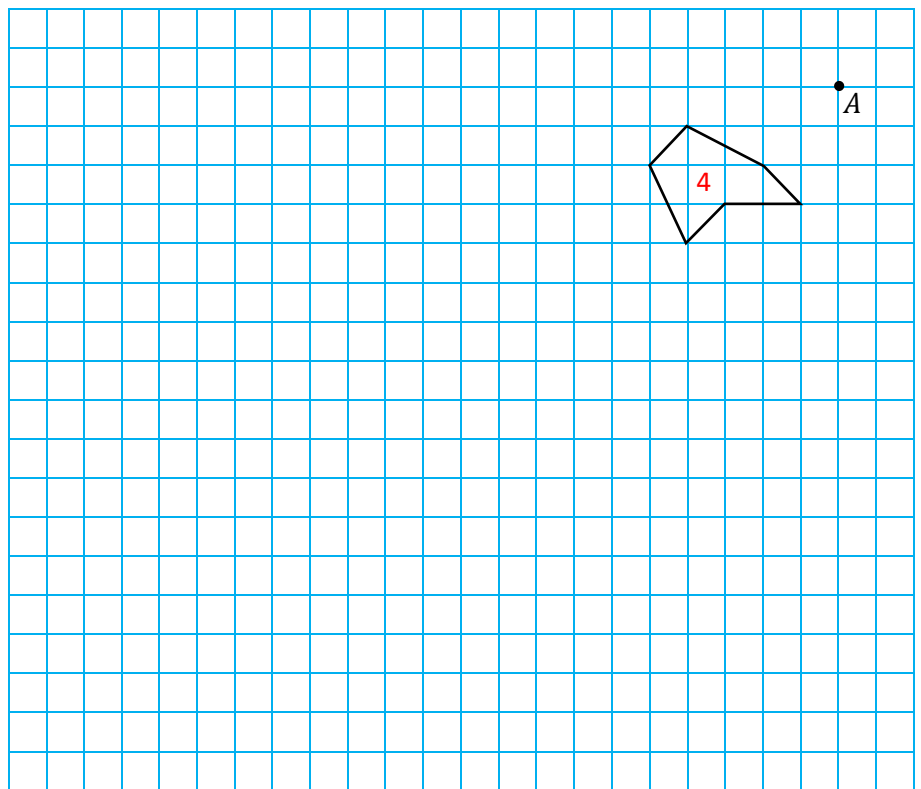
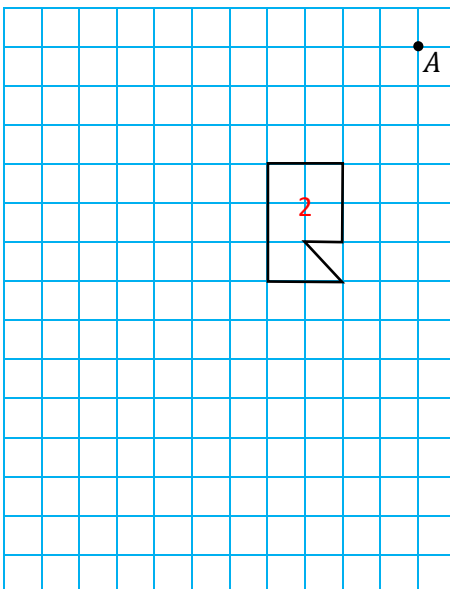
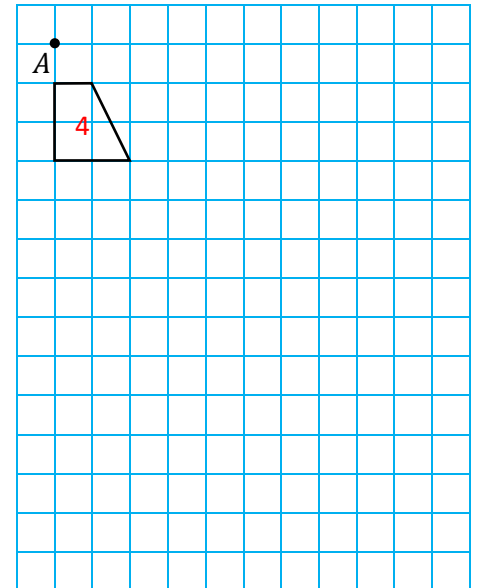
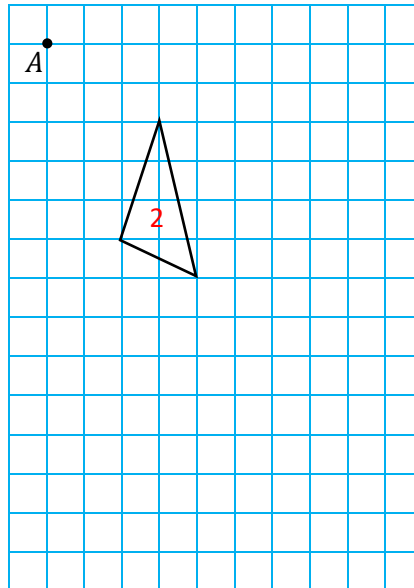
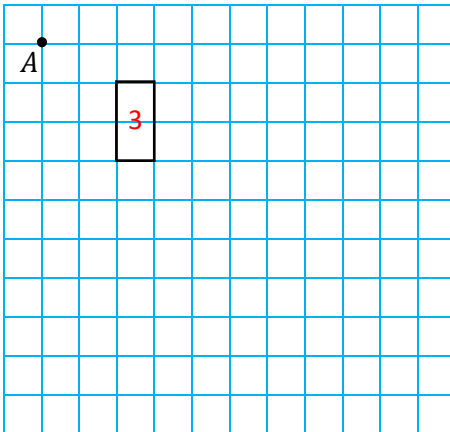


I fynd o'r pwynt A i fertig P y triongl gwreiddiol, rhaid mynd **2 uned i'r dde** ag **1 uned i lawr**. Gan fod y ffactor graddfa'n 3, i fynd o'r pwynt A i fertig P' y triongl newydd, rhaid mynd  **$2 \times 3 = 6$  uned i'r dde** a  **$1 \times 3 = 3$  uned i lawr**. Gellid ailadrodd hyn efo'r fertigau eraill (Q ag R), neu gellid cychwyn yn y fertig P' a llunio triongl sydd tair gwaith yn fwy.



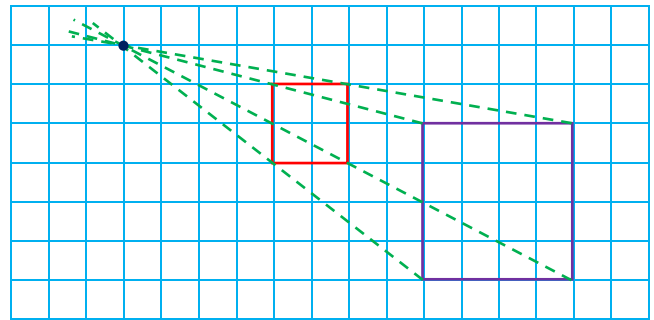
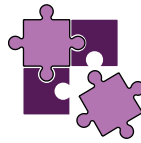
## Ymarfer 3

Helaethwch y siapiau canlynol gan ddefnyddio'r pwynt  $A$  fel canol yr helaethiad a'r rhif yng nghanol y siâp fel y ffactor graddfa.



**Darganfod canol helaethiad**

O gael **siâp** a'i **helaethiad**, **cysylltwch y fertigau cyfatebol ac ymestynnwch y llinellau** er mwyn darganfod ble mae **canol yr helaethiad**.

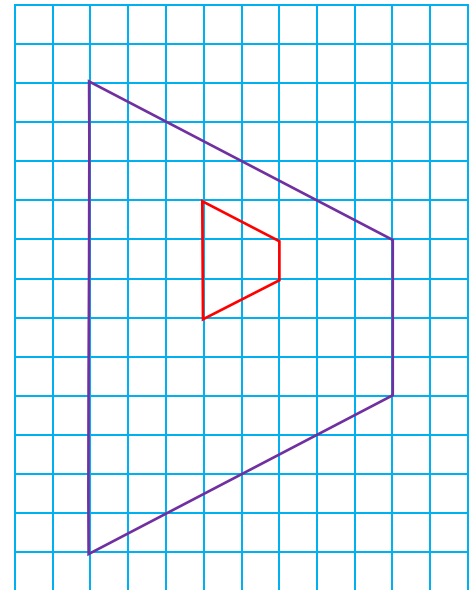
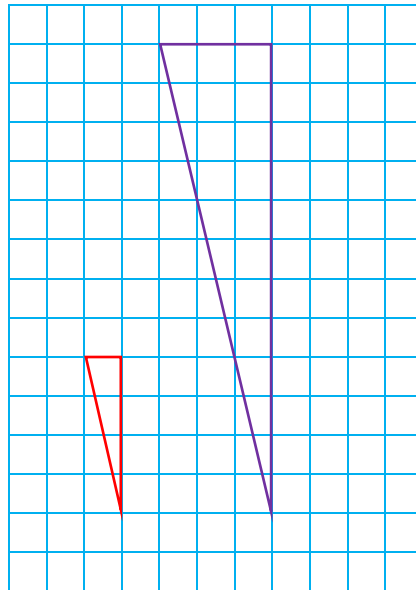
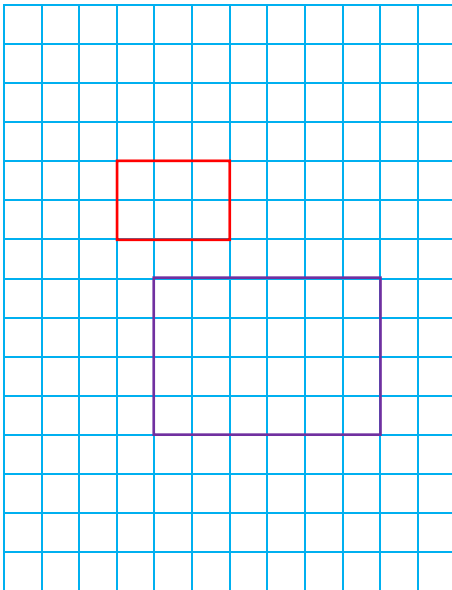


Gallwch ffeindio'r ffactor graddfa trwy gymharu maint y siapiau.

**Ymarfer 4**

Darganfyddwch y ffactor graddfa a chanol yr helaethiad ar gyfer yr helaethiadau canlynol.

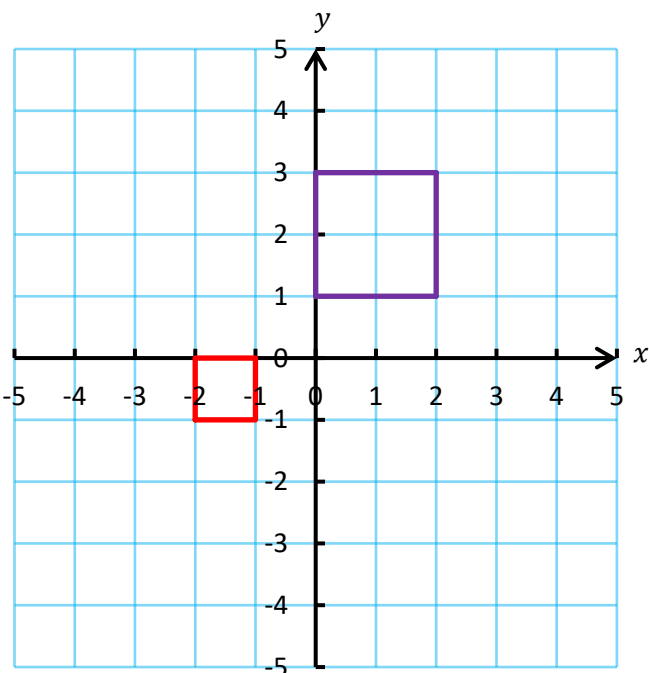
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**Ymarfer 5**

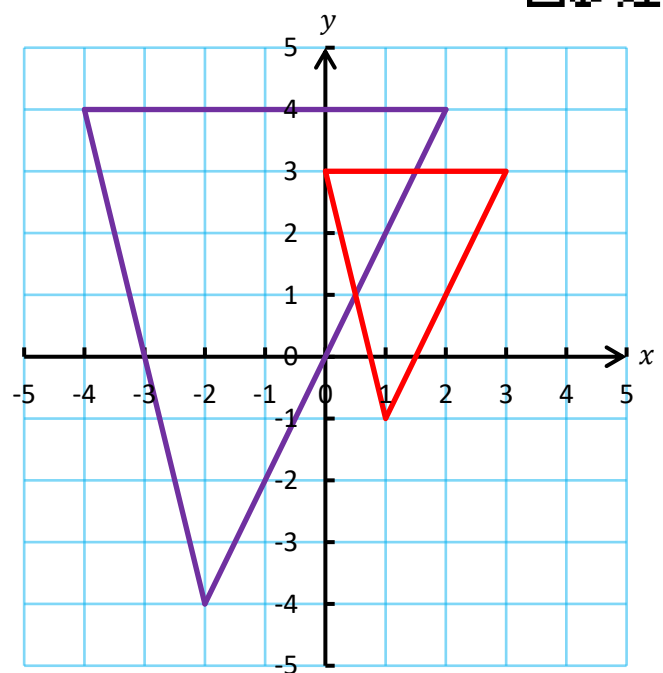
Darganfyddwch y ffactor graddfa a chanol yr helaethiad ar gyfer yr helaethiadau canlynol.



(a)



(b)



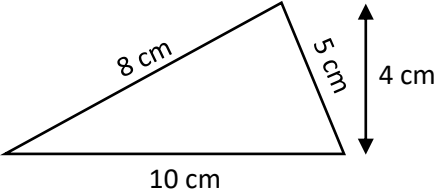
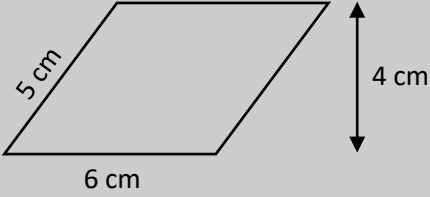
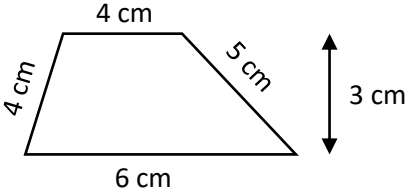
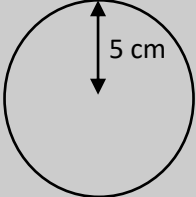
## Siapiau Cyfansawdd

## Ymarfer 6

Cwblhewch y tabl canlynol.

Adolygu

13

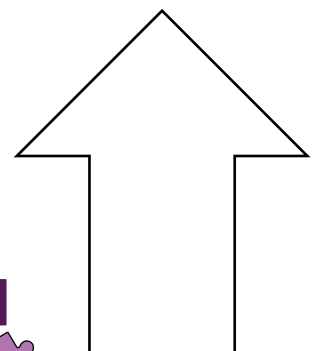
| Siâp                                                                                | Enw'r Siâp | Fformiwla i ffeindio arwynebedd y siâp | Cyfrifo arwynebedd y siâp |
|-------------------------------------------------------------------------------------|------------|----------------------------------------|---------------------------|
|    |            |                                        |                           |
|    |            |                                        |                           |
|   |            |                                        |                           |
|  |            |                                        |                           |
|  |            |                                        |                           |

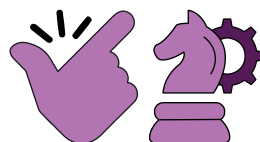
## Ymarfer 7

Cyfrifwch berimedr bob un o'r siapiau yn y tabl uchod.

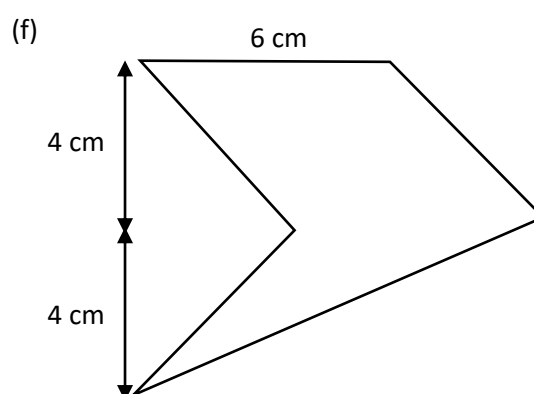
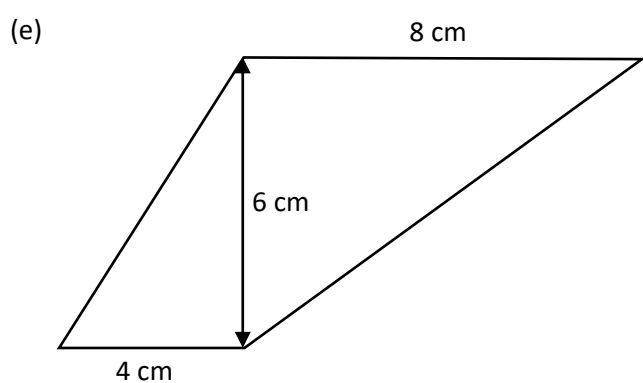
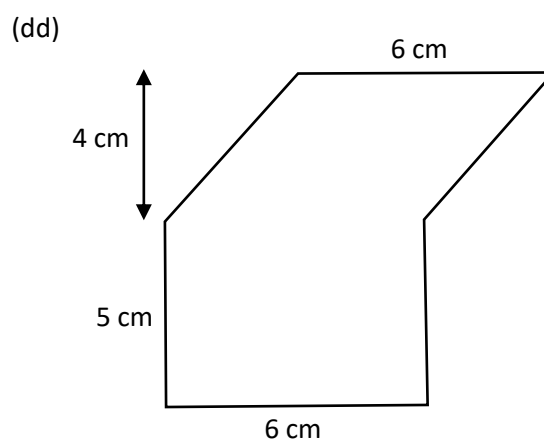
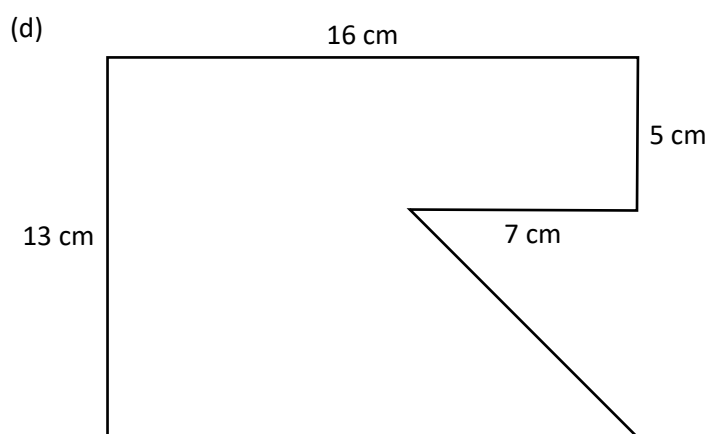
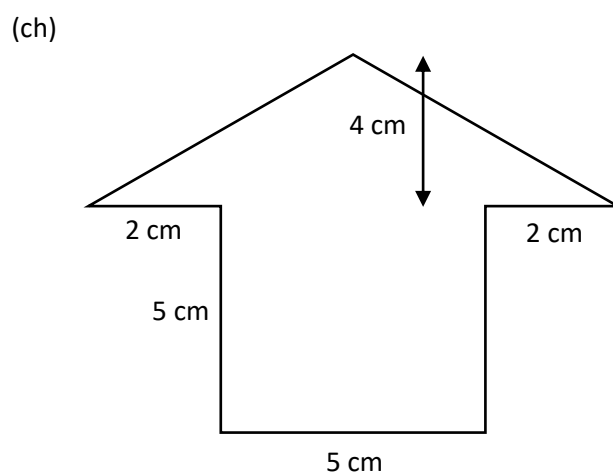
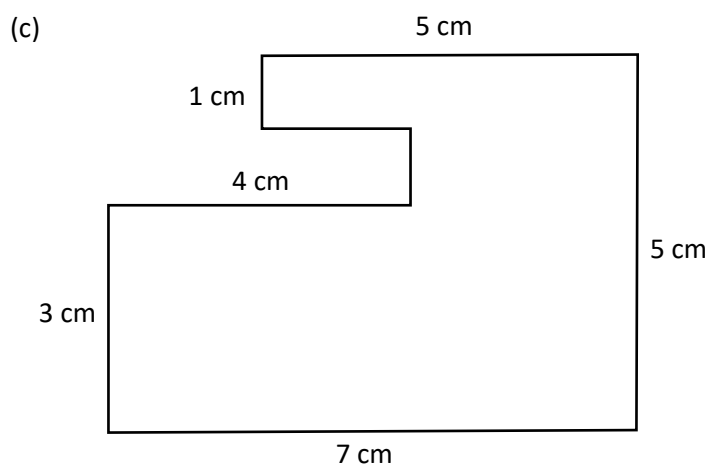
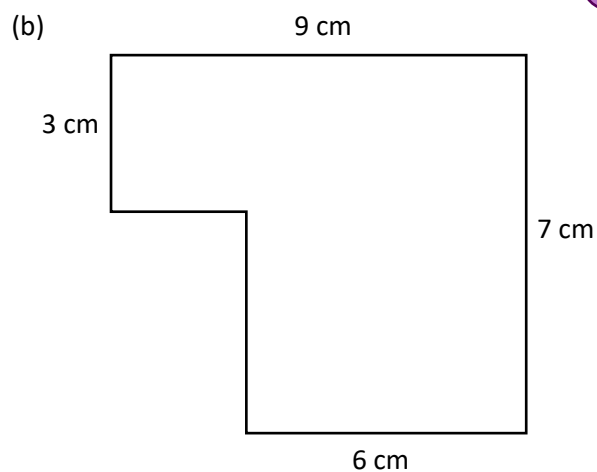
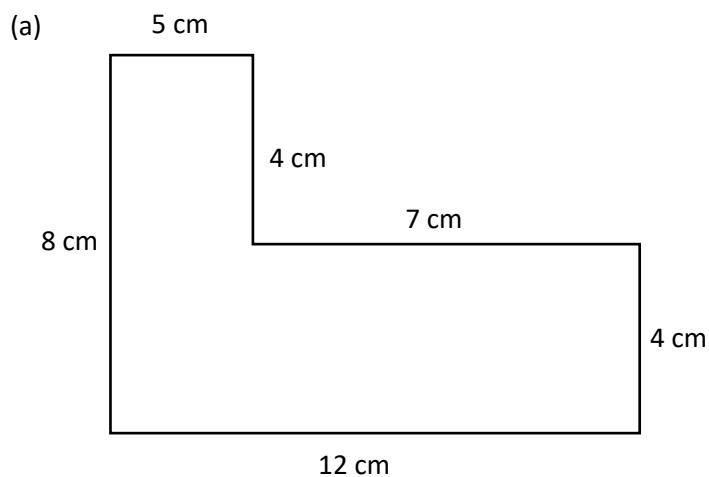
## Siapiau Cyfansawdd

Mae **siâp cyfansawdd** yn siâp y mae'n bosib ei holli i mewn i siapiau mwy syml, fel y rhai yn y tabl uchod. Er enghraifft, mae'r siâp ar y dde yn siâp cyfansawdd – mae'n bosib ei holli i mewn i betryal (ar y gwaelod) a thriongl (ar y top). Byddai'n bosib cyfrifo arwynebedd y siâp cyfansawdd trwy adio arwynebedd y petryal a'r thriongl.



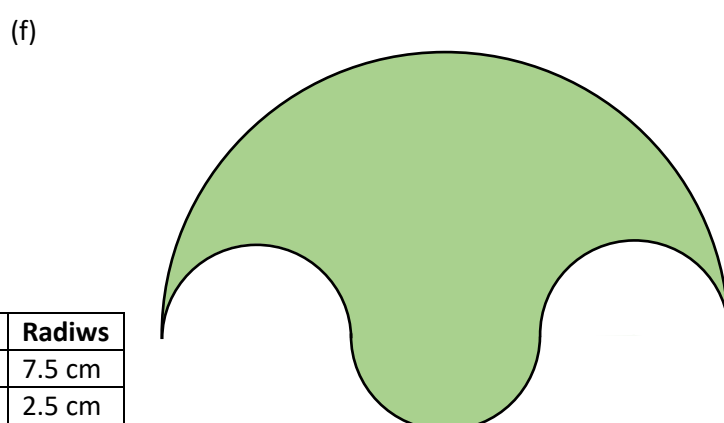
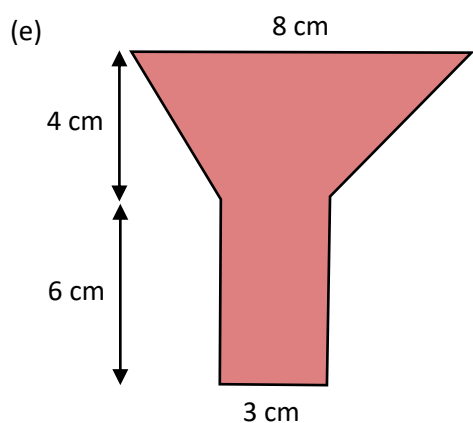
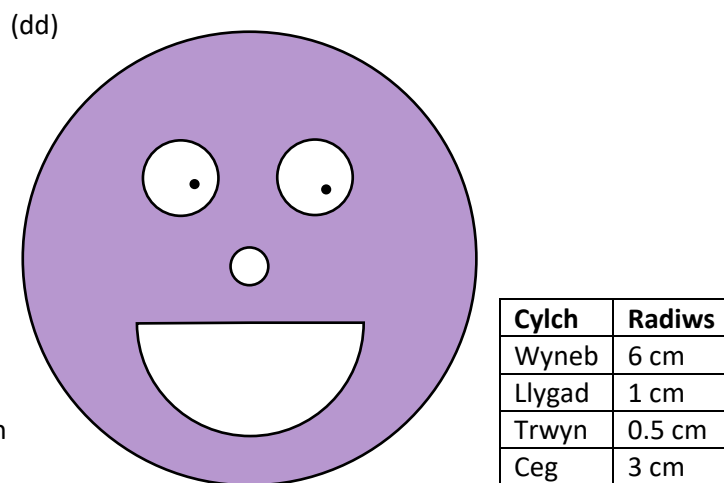
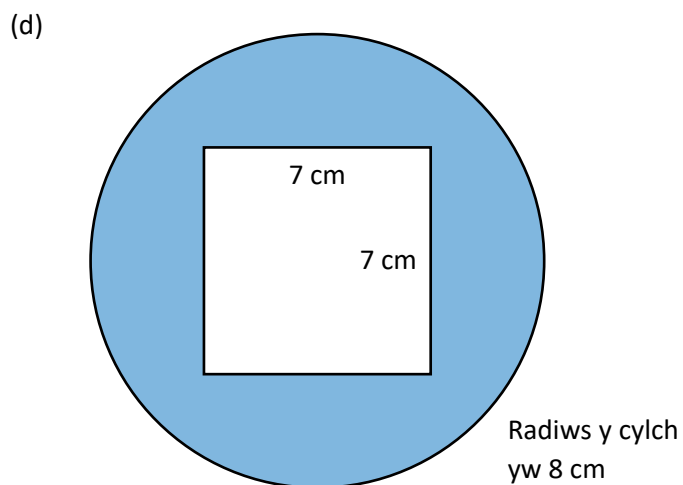
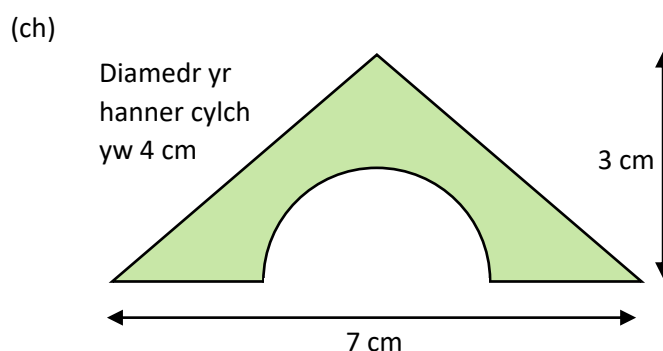
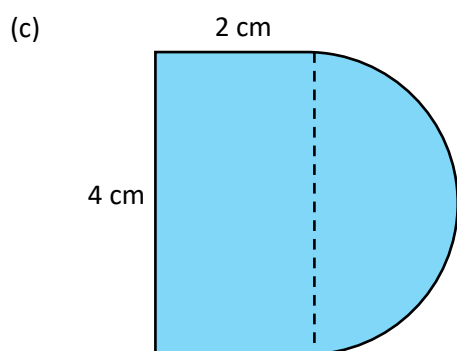
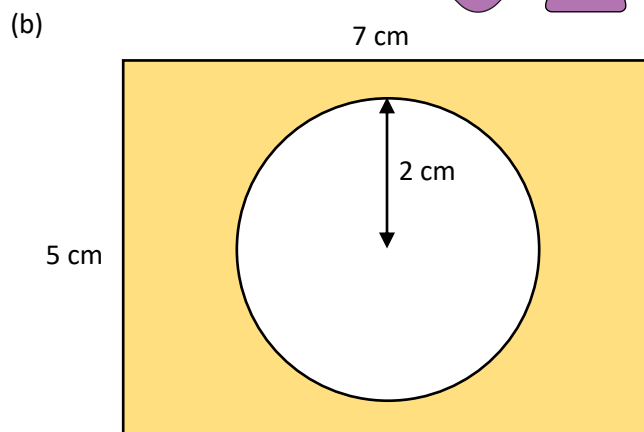
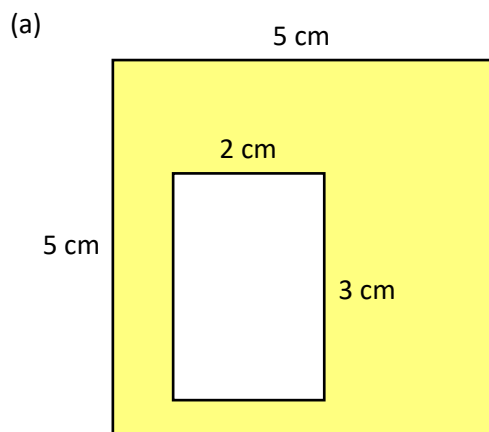
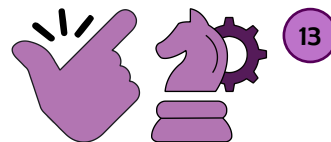
**Ymarfer 8**

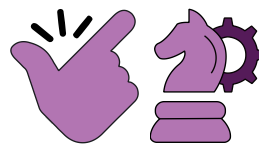
Cyfrifwch arwynebedd bob un o'r siapiau cyfansawdd canlynol.



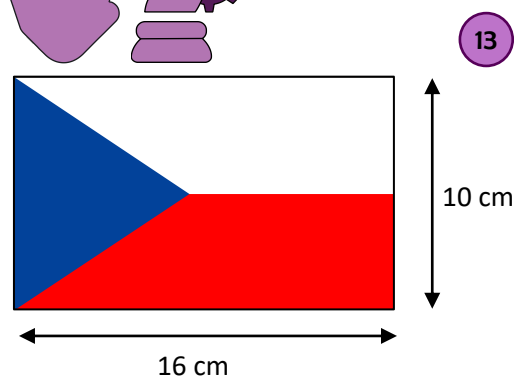
## Ymarfer 9

Cyfrifwch arwynebedd y darn lliw.



**Ymarfer 10**

(a) Mae fflag Y Weriniaeth Tsiec yn cael ei ddangos ar y dde. O wybod bod fertig y triongl glas yng nghanol y fflag, cyfrifwch arwynebedd y rhanbarth coch.

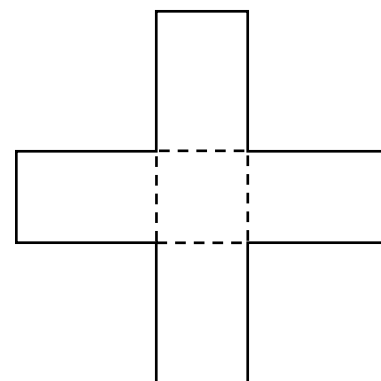


(b) Mae patrwm sydd â siâp croes yn cael ei wneud drwy drefnu pedwar petryal unfath (*identical*) o amgylch ochrau sgwâr, fel sy'n cael ei ddangos yn y diagram ar y dde. (Nid yw'r diagram wedi'i luniadu wrth raddfa.)

Arwynebedd y sgwâr yw  $36 \text{ cm}^2$ . Mae arwynebedd pob petryal unwaith a hanner cymaint ag (*one and a half times*) arwynebedd y sgwâr.

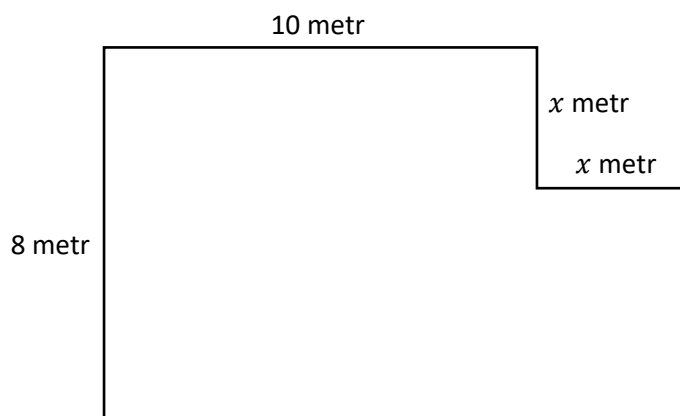
(i) Darganfyddwch arwynebedd y patrwm sydd â siâp croes.

(ii) Darganfyddwch berimedr y patrwm sydd â siâp croes.



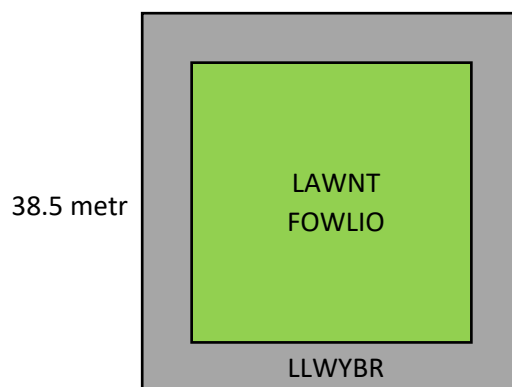
(c) Mae Gerry wedi braslunio cynllun llawr ystafell. Mae pob un o gorneli'r ystafell naill ai'n  $90^\circ$  neu'n  $270^\circ$ . Mae Gerry wedi anghofio rhai o'r mesuriadau ond mae hi'n gwybod bod dau o'r mesuriadau yr un fath, ac felly mae hi wedi labelu y ddau ohonyn nhw yn  $x$  metr.

Dangoswch mai arwynebedd y llawr, mewn metrau sgwâr, yw  $80 + 8x - x^2$ .



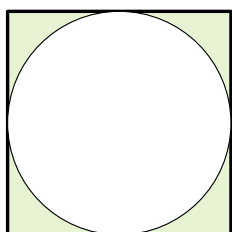
(ch) Penderfynodd y cyngor lleol osod llwybr concrit â'i led yn  $1\frac{1}{2}$  metr o amgylch eu lawnt fowlio sgwâr (*square bowling green*), fel sy'n cael ei ddangos yn y diagram.

Cyfrifwch arwynebedd y llwybr concrit, mewn metrau sgwâr.



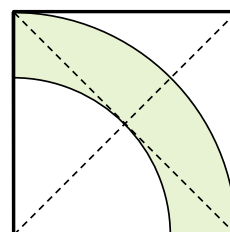
**Sialens!**

Pa ffracsiwn o'r sgwâr sydd wedi'i dywyllu?



**Sialens 2!**

Pa ffracsiwn o'r sgwâr sydd wedi'i dywyllu?



**Pos:** Darganfyddwch y saith gwahaniaeth rhwng y lluniau isod.





Enw: .....

Canran yn y prawf: .....

Yn gwybod  
y gwaith?Angen  
adolygu?Cwestiwn  
yn y prawfYn gywir  
yn y  
prawf?

|                                                                                                     |  |  |      |  |
|-----------------------------------------------------------------------------------------------------|--|--|------|--|
| Rwy'n gallu <b>helaethu</b> siâp gan ddefnyddio ffactor graddfa sy'n <b>gyfanrif positif</b> .      |  |  | 1    |  |
| Rwy'n gallu <b>helaethu</b> siâp gan ddefnyddio ffactor graddfa sy'n <b>ffracsiwn</b> .             |  |  | 3    |  |
| Rwy'n gwybod sut i ddefnyddio <b>canol helaethiad</b> wrth helaethu siâp.                           |  |  | 2    |  |
| O gael siâp a'i helaethiad, rwy'n gallu <b>darganfod y ffactor graddfa a chanol yr helaethiad</b> . |  |  | 4    |  |
| Rwy'n gallu cyfrifo <b>perimedr siâp cyfansawdd</b> .                                               |  |  | 5, 6 |  |
| Rwy'n gallu cyfrifo <b>arwynebedd siâp cyfansawdd</b> .                                             |  |  | 7, 8 |  |