

# Qauv Kawm Zauv- Qib Plaub (4)

## Niamtxiv thiab Xibfwb Txhawb Tswvyim

### Paub Zauv (Number Sense)

**1.0** Menyuam kawm ntawv to taub tus nqi tsim nyog ntawm cov zauv kheej thiab cov zauv muaj cim quas ob tug zauv seem thiab seb tus zauv kheej thiab cov zauv seem ho sib haum li cas thiaj seem. Menyuam kawm ntawv siv lub ntsiab tswv yim uas siv cov zauv tsawg tshaj (negative numbers).

- 1.1** Nyeem thiab sau zauv mus txog ib lab.  
**1.2** Sau cov zauv seem kom tau txog ob tug.

**1.3** Muab cov zauv kheej lost so kom muaj theem xwsi them kaum, theem pua, theem phav, theem kaum phav, losyog theem pua phav (*ten, hundred, thousand, ten thousand, or hundred thousand*).

**1.4** Txiaiv txim siab saib thaum twg thiaj muab tau tus zauv kheej los tso tau ua ib theem zuj zus thiab txawj qhia tau tias ua li ntawd yeej tsim nyog lawm.

**1.5** Txawj txhais tau cov zauv feem, xwsi, if feem ntawm ib pob, ib feem ntawm ib pawg, thiab muab tus zauv kheej faib rau lwm tus zauv kheej; piav tau qhov muaj sib npaug ntawm nws feem.

**1.6** Sau tau feem kaum thiab feem pua (tenths and hundredths) ntawm cov zauv feem thiab cov zauv seem uas sib npaug zos li ib nrab thiab ib feem plaub. (pivxam,  $1/2 = 0.5$  losyog .50;  $7/4 = 1\ 3/4 = 1.75$ ).

**1.7** Sau tau cov zauv seem uas yog ib qho ntawm ib yam khoom; txawj muab piv tau rau daim duab kos ua tej seem; thiab paub muab piv rau kab zauv seem.

**1.8** Paub cov zauv tsawg tshaj qho muaj (*negative numbers*) (pivxam, ib kab zauv, suav zauv, saib cua kub cua txias).

**1.9** To taub qhov chaw ntawm tus zauv feem, tus zauv kheej txuam tus zauv feem, thiab tus zauv kheej ntawm ib kab zauv, thiab qhia tau cov zauv seem uas muaj cim quas ob tug.

**2.0** Menyuam kawm ntawv paub txoj kev siv cov zauv kheej los sib ntxiv thiab sib rho nrog cov zauv seem.

**2.1** Pub siv cov zauv kheej los sib ntxiv lossis sib rho nrog cov zauv seem ob tug.

**2.2** Paub muab cov zauv seem kem ob tug los ua kom tau ib tug zauv seem kheej losyog ua kom tau ib tug zauv kheej thiab ntsuas kom muaj nqi yuav luag sib npaug.

**3.0** Menyuam kawm ntawv txawj daws tau cov zauv sib ntxiv, sib rho, sib npaug, thiab sib faib thiab to taub txoj kev sib raug ntawm cov zauv:

**3.1** To taub thiab muaj peev xwm ua tau cov zauv pivtxwv sib txuam (standard algorithms) los sib ntxiv thiab sib rho tau.

**3.2** To taub thiab muaj peev xwm ua tau cov zauv pivtxwv sib txuam (standard algorithms) los ua lev txooj nrog ntau ntau tus zauv nrog ob tug zauv thiab ua tau cov zauv sib faib ntau tus rau ib tug; siv kev sib raug ntawm cov zauv los xam thiab ua kom tawm.

**3.3** Ua tau cov lej txooj uas muaj ntau tus los ua nrog rau cov ob tug.

**3.4** Ua tau cov zauv sib faib uas muaj ntau tus los faib rau cov zauv ua muaj ib tug.

**4.0** Menyuam kawm ntawv paub ua cov zauv faib me:

**4.1** To taub tias cov zauv kheej me muaj ntau tus txooj uas yuav ua kom tshwm tau tib yam (xwsi  $12 = 4 \times 3 = 2 \times 6 = 2 \times 2 \times 3$ ).

**4.2** Paub tias cov zauv 2, 3, 5, 7, thiab 11 tsis muaj lwm tus zauv txooj uas yuav ua kom tshwm tib yam tau tsuas yog tus zauv 1 nkaus xwb thiaj ua tau nrog, thiaj tis lub npe hu ua "prime numbers".

### Zauv "Algebra" thiab Nws Qhov Kev Siv

**1.0** Menyuam kawm ntawv siv thiab nkag siab cov cim tsiaj ntawv sawv cev cov zauv (variables), cov cim kev kawm txog zauv (mathematical symbols), thiab los mus sau thiab los rheed kab zauv ntawv:

**1.1** Siv tsiaj ntawv, voos plaub fab, lossis lwm yam cim los sawv cev ua ib tug zauv ntawm kom tshwm sim tau kab zauv (nkag siab thiab to taub siv lub ntsiab ntawm cov zauv txawj hloov mus-mus los-los "variable").

**1.2** Nkag siab thiab soj ntsuas kab zauv uas tamsim no nyob rau hauv tus cim quas "()".

**1.3** Siv tus cim quas "()" los qhia seb yuav laij pawg zauv twg ua ntej thaum kab zauv muaj ntau tshaj ib pawg thiab ntau dua ib txoj hauv kev los laij.

**1.4** Siv thiab nkag siab tus qauv zauv "formulas" (piv txwv li, thaj chaw = ntev x dav los sis  $A = lw$ ) los rheed kom tau seb ntau thiab ze npaum licas.

**1.5** Tau taub tias ib rooj zauv xwsi  $y = 3x + 5$  yog ib qho qauv yuav los nrhiav tau tus zauv zus ob yog hais tias tus zauv zus ib twb muab ua ntej lawm.

**2.0** Cov tub kawm paub muab cov zauv hloov mus los:

**2.1** Paub thiab nkag siab tias rooj zauv sib npaug sib ntxiv rau qhov sib npaug ntawv yog muaj sib npaug.

**2.2** Paub thiab nkag siab tias ib zaug ntawm qhov sib npaug laij rau nws qhov sib npaug yog muaj sib npaug.

### Ua Cov Zauv Luj thiab Ntsuas

**1.0** Tub kawm to taub qhov ntsuas ntawm ib ncig thiab ib thaj chaw:

**1.1** Ntsuas ib thaj chaw plaub fab tsis xwm fab xwm meem uas siv twj ntsuas kom tsimnyog xws li "square centimeter (cm<sup>2</sup>), square meter (m<sup>2</sup>), square kilometer (km<sup>2</sup>), square inch (in<sup>2</sup>), square yard (yd<sup>2</sup>), losyog square mile (mi<sup>2</sup>)".

**1.2** Pom tau tias cov voos plaub fab tsis xwm fab xwm meem ntsuas tau sib luag sab hauv los tus ciaj ciam sab nraud yuav tsis sib luag.

**1.3** Tau taub tias cov voos plaub fab tsis xwm fab xwm meem muaj tus ciaj ciam sab nraud sib luag los thaj chaw sab hauv yuav tsis sib luag.

**1.4** Nkag siab siv tus qauv zauv los laij cov nrim sab nraud thiab ib cheeb ncig hauv lub voos plaub fab tsis xwm fab xwm meem thiab lub voos plaub fab xwm fab xwm meem. Siv cov qauv zauv ntawv los

nrhiav thaj chaw uas muaj ntau ceg, yuav tau muab faib mus ua tej ces me kom yooj yim nrhiav.

**2.0** Tub kawm ntawv siv ob-qhov dav (two-dimensional) los mus lis kom dhia sib haum rau txhua txhua tee thiab ntsuas cov kab thiab cov zauv kom tau yooj yim:

**2.1** Kos cov teev dub dub ntawm ib daim ntawv los piv rau ib kab zauv (pivtxwv, tso 10 tee dub dub rau ntawm daim dua kab "graph" uas siv rooj zauv  $y = 3x$  ces tis ib txoj kab ncaj qha rau lawv. draw 10 points on the graph of the equation  $y = 3x$  and connect them by using a straight line).

**2.2** Nkag siab tias qhov ntev ntawm ib txoj kab tav muaj sib npaug li qhov tawm ntawm qhov sib rho ntawm kab-x "x-coordinates".

**2.3** Nkag siab tias qhov ntev ntawm ib txoj kab ntsug muaj sib npaug li qhov tawm ntawm qhov sib rho ntawm kab-y "y-coordinates".

**3.0** Tub kawm ntawv qhia tau tias lawv nkag siab tau meej txog cov voos thiab kab thiab siv txoj kev paub no los rheed thiab los laij kom tau rooj zauv ntawv:

**3.1** Qhia taub cov kab mus ib seem thiab txoj kab ncaj ncaj saud los.

**3.2** Qhia taub cov kab txuas txog ib nrab thiab txuas tshab ntawm ib lub vojvoog.

**3.3** Qhia taub vajvoos zoo sib zws.

**3.4** Qhia taub cov zauv uas muaj ob sab sib dho thiab muab rov sib dho tau sib sib luag.

**3.5** Paub lub ntsiab txhais ntawm lub kaum sab xis, lub kaum ntse ntse, lub kaum loj (right angle, an acute angle, and an obtuse angle). Tau taub tias 90°, 180°, 270°, thiab 360° yog muaj feem uake, ze nrog rau 1/4, 1/2, 3/4, thiab cov ua tig zeeg kiag.

**3.6** Pom tau, piav tau, thiab ua tau tus qauv ntawm ib cov vajvoos ntse hau "prisms, pyramids" kom xwm tus najnpawb, hom loj me ntawm ib sab, kab, thiab kaum; nkag siab yam khoom uas muaj ob-sab hais tias yog sawv cev los ntawm cov peb-sab; thiab kos ib co qauv (cov sab) rau ib yam khoom kheej, yog thaum muab txiaiv thiab tais tau los, yuav tshwm tau lub qauv qub.

**3.7** Paub ntau lub ntsiab txhais txog ntawm cov vajvoos peb sab (equilateral, isosceles, scalene) thiab paub los taug tau lawv cov caj ceg and identify their attributes.

**3.8** Paub ntau lub ntsiab txhais txog ntawm cov vajvoos plaub sab "rhombus, square, rectangle, parallelogram, trapezoid".

### Muab Zuaj Los Ua Pawg, Txheeb Cais, thiab Yuav Qhov Muaj Tseeb

**1.0** Menyuam kawm ntawv paub los teeb kom muaj paus muaj ntsis, qhiab tau thiab txhais tau ntawm ib pawg zauv twg thiab ntawm cov zauv hais sib txuas pes daws mus kom meej tseeb:

**1.1** Tshwm tus qauv ua lus nug txog kev tshawb fawb; tuav thiab ib txhoj kab ua zauv los sawv cev qhia; thiab muaj cov duab kab qhia, tej zeg ntawv teeb los qhia thiab duab kos qhia (graphs, tables, and charts).

**1.2** Qhia tau lub niam tswv yim rau ib pawg xwm txheeb thiab lub niam tswv yim rau ib pawg zauv muaj uake sib txuas pes daws.

**1.3** Txhais tau ib-thiab ob ntawm cov zauv nce mus nce los ntawm daim duab kab (graph) los teb cov lus nug txog ntawm ib lub caijnyoog twg.

**2.0** Tub kawm ntawv kws yees txog qhov yuav tshwm ntawm cov zauv yooj yim:

**2.1** Txhua txoj hauv kev yuav tshwm sim tau rau ib sob zauv yog teeb tau muaj paub muaj ntsis. (muab pivtxwv li, tej zeg tej zeg kab, tej tee tej tee kab, daim duab ncau ceg)

**2.2** Hais tau txhua kev tawm ntawm cov zauv xwm li siv ncauj hais thiab siv cov zauv sib txhuas pes daws (muab pivtxwv li, 3 feem los ntawm 4 feem; 3/4).

### Cov Zauv Ua Lus Nug

**1.0** Menyuam txiaiv txim txog yuav laij ib sob zauv li cas:

**1.1** Tsom xam sob zauv kom paub ntawm nws qhov kev sib thooj, paub qhov txawv thiab zoo ib yam ntawm cov xwm txheeb, muab sib dhos thiab sib lawv thiab tsom xam cov qauv ua tshwm.

**1.2** Ntsuas tau tias thaum twg thiab yuav tsim nyog muab ib sob zauv txiaiv los ua kom tau yooj yim.

**2.0** Tub kawm siv tswv yim los ua, kev peev xwm, thiab tswv yim los nrhiav kev laij sob zauv kom tawm:

**2.1** Siv kev kwv yees los ntsuas kom tau sob zauv uas twb ua tau tawm lawm.

**2.2** Siv tswv yim ua thiab rheed kom tau hauv sob zauv yooj yim mus siv rau sob zauv nyuaj.

**2.3** Siv ntau yam hauv kev xwm li, hais lus, zauv (*numbers*), cim (*symbols*), phiaj qhia (*charts*), duab kab (*graphs*), tej zeg kab (*tables*), daim phiaj kos qhia (*diagrams*), thiab ib co qauv los piav txog txoj kev xam thiab ntsuas thaum laij ib so zauv uas nws muaj haj tom.

**2.4** Qhia lub ntsiab lus kom meej thiab qhov uas siv nyog thaum los mus siv zauv thiab nws ncau lus ntawv kom hais tau meej pem thiab muaj pov thawj los mus txhawb nws cov lus thiab ntawm lub cim.

**2.5** Qhia tau xws nkaus thiab yog raws li sob zauv thiab muab cov lus teb kom ncaj nraim thiab raug.

**2.6** Laij tau sob zauv kom haum thiab soj sob zauv lub ntsiab ntawm qhov laij tawm.

**3.0** Tub-Ntxhais kawm dhau ntawm ib cov zauv mus txhua rau lwm cov zauv:

**3.1** Tsom xam qhov tshwm sim tau tshiab ntawv los mus piv rau lub hauv paus thaum xub thawj tshwm.

**3.2** Tshwm tau lub zoo tswv yim los qhia thiab nkag siab zoo txog qhov kev yuav los rheed kom tau ib sob zauv uas nws sib xws.

**3.3** Tshwm kom tau kev xav seb yuav tawm licas los ces muab coj mus siv rau qhov uas tseem ceeb.