

Nā Ana Pili Helu - Papa 4

Unuhi 'ia mai CCSS

Domain	Cluster	Code	Ke Ana	Nā Kakaha
Nā Hana Ho'omākalakala a a me ka Mana'o Hō'ailona Helu Operations and Algebraic Thinking	Ho'ohana i nā hana ho'omākalakala 'ehā me nā helu piha e ho'omākalakala i nā polopolema~nane pilihelu~nane ha'i Use the four operations with whole numbers to solve problems. (1.1)	4.OA.A.1	Unuhi i ka ha'ihelu ho'onui ma ka ho'ohālikelike 'ana, e la'a: $35 = 5 \times 7$ e hō'ike ana i ka 35 he pālima ia i ka 7 a he pāhiku ia i ka 5. Hō'ike i nā ha'ihelu ho'onui no i nā ho'ohālikelike i ho'onui 'ia.	
		4.OA.A.2	Ho'onui a i 'ole pu'unauē no ka ho'omākalakala 'ana i nā nane ha'i a'ōlelo nona ka ho'ohālikelike ho'onui 'ana, e la'a, ma nā ki'i a me nā ha'ihelu me ka hō'ailona e kū ana no ka helu i 'ike 'ole 'ia, hō'oko'a i ka ho'ohālikelike ho'ohui.	
		4.OA.A.3	Ho'omākalakala i nā nane ha'i e pono ai he mau ka'ina hana nona nā helu piha a me nā ha'ina helu piha me ka ho'ohana 'ana i nā hana ho'omākalakala 'ehā, a me nā nane ha'i e pono ai ka unuhi 'ia 'ana o nā koena. Hō'ike i kēia mau nane ha'i me ka ho'ohana 'ana i ka hua palapala e kū ana no ka helu i 'ike 'ole 'ia. Hō'oia i ke kūpono o nā ha'ina ma o ka helu na'au 'ana a ma o ke koho 'ana a me ke kolikoli 'ana.	
	Hele a kama'āina me nā helu ho'onui a me nā helu māhua Gain familiarity with factors and multiples. (1.2)	4.OA.B.4	Huli a loa'a nā pa'a helu ho'onui a pau o kekahi helu piha mai ka 1-100. Ho'okū'ike i ka helu piha he helu māhua ia o kona mau helu ho'onui pākahi a pau. Hō'oia i ka helu piha e kuhi 'ia mai ka 1-100 he helu māhua ia o kekahi helu kikoho'e ho'okahi e kuhi 'ia. Hō'oia i ka helu kumu a i 'ole ka helu huihuina kekahi helu piha mai ka 1 a i ka 100.	

	<p>Haku a kālailai i nā lauana</p> <p>Generate and analyze patterns.</p> <p>(1.3)</p>	<p>4.OA.B.5</p>	<p>Ho‘opuka i ka lauana helu a i ‘ole ka lauana kinona e hahai ana i kekahi lula i kuhi ‘ia.</p> <p>Ho‘omaopopo i nā hi‘ona o ka lauana i ‘ike le‘a ‘ole ‘ia ma ia lula iho. E la‘a, ke hā‘awi ‘ia ka lula e “Ho‘ohui i ka 3” a me ka helu ho‘omaka he 1, ho‘opuka i nā paukū o ke ka‘ina e loa‘a ana a nānā ‘ia ke kuapo ‘ana o nā paukū he helu kau‘ewa a he helu kaulike. Wehewehe i ke kumu o ke kuapo mau ‘ana pēlā.</p>	
<p>Nā Helu a me nā Hana Ho‘omākalaka a ma ke Kumu Ho‘onui Pā‘umi</p> <p>Number and Operations in Base Ten</p>	<p>Ho‘olaulā i nā mea e maopopo e pili i ke kūana helu i nā helu piha lau kikoho‘e</p> <p>Generalize place value understanding for multi-digit whole numbers.</p> <p>(2.1)</p>	<p>4.NBT.A.1</p>	<p>Ho‘okū‘ike i ke ‘ano o nā helu kikoho‘e lehulehu ‘o ia ho‘i he pā‘umi ke kikoho‘e ma kekahi kūana i ka helu ma kona ‘ao‘ao ‘ākau.</p> <p>E la‘a, ho‘omaopopo i ka $700 \div 70 = 10$ ma o ka ho‘ohana ‘ana i nā mana‘o kūanahelu a pu‘unaue. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā helu piha ma lalo a i ‘ole like me ka 1,000,000.)</p>	
		<p>4.NBT.A.2</p>	<p>Heluhelu a kākau i nā helu kikoho‘e lehulehu piha me ka ho‘ohana ‘ana i nā helu kumu ho‘onui ‘umi, nā inoa helu a me ka unuhi kūana.</p> <p>Ho‘ohālikelike i ‘elua helu kikoho‘e lehulehu ma o nā mana‘o o nā helu ma nā kūana pākahi, me ka ho‘ohana ‘ana i nā hō‘ailona $>$, $=$, a me ka $<$ no ka ho‘opa‘a ‘ana i nā hopena o ia mau ho‘ohālikelike ‘ana. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā helu piha ma lalo a i ‘ole like me ka 1,000,000.)</p>	
		<p>4.NBT.A.3</p>	<p>Ho‘ohana i ka ‘ike kūana helu no ke kolikoli ‘ana i nā helu kikoho‘e lehulehu i nā kūana helu like ‘ole.</p> <p>(Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā helu piha ma lalo a i ‘ole like me ka 1,000,000.)</p>	
	<p>Ho‘ohana i ka ‘ike kūana helu a me ka ‘ike ‘anopili hana ho‘omākalaka e ho‘omākalaka i nā helu lau kikoho‘e.</p>	<p>4.NBT.B.4</p>	<p>Ho‘ohui a ho‘olawe me ka mākaukau i nā helu kikoho‘e lehulehu piha me ka ho‘ohana ‘ana i ke ka‘ina ha‘ihelu kūmau.</p> <p>(Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā helu piha ma lalo a i ‘ole like me ka 1,000,000. Hiki ke ho‘ohana ‘ia kekahi mau ka‘ina ha‘ihelu.)</p>	

	<p>Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>(2.2.)</p>	<p>4.NBT.B.5</p>	<p>Ho‘onui i ka helu piha a i ka ‘ehā kikoho‘e i kekahi helu piha kikoho‘e ho‘okahi, a ho‘onui i ‘elua helu kikoho‘e ‘elua, me ka ho‘ohana ‘ana i nā ka‘akālai kūana helu a me ke ‘anopili hana ho‘omākalakala.</p> <p>Kahaki‘i a wehewehe i ka loa‘a ‘ana o ia ha‘ina ma o nā ha‘ihelu, nā lau huiāhā lō‘ihi, a/a i ‘ole nā la‘ana ‘ili. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā helu piha ma lalo a i ‘ole like me ka 1,000,000. Hiki ke ho‘ohana ‘ia kekahi mau ka‘ina ha‘ihelu.)</p>	
		<p>4.NBT.B.6</p>	<p>Huli a loa‘a nā helu puka piha a me nā koena o nā kumu pu‘unaue a i ka helu kikoho‘e ‘ehā a me nā helu komo kikoho‘e ho‘okahi, me ka ho‘ohana ‘ana i nā ka‘akālai kūana helu, nā ‘anopili hana ho‘omākalakala, a/a i ‘ole ka pilina o ka ho‘onui a me ka pu‘unaue.</p> <p>Kahaki‘i a wehewehe i ka loa‘a ‘ana o ia huli ‘ana ma o nā ha‘ihelu, nā lau huiāhā lō‘ihi, a/a i ‘ole nā la‘ana ‘ili. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā helu piha ma lalo a i ‘ole like me ka 1,000,000. Hiki ke ho‘ohana ‘ia kekahi mau ka‘ina ha‘ihelu.)</p>	
<p>Nā Helu a me nā Hana Ho‘omākalakala: Nā Hakina</p> <p>Number and Operations: Fractions</p>	<p>Ho‘ooloa i ka ‘ike e pili i nā hakina like a me ka ho‘oka‘ina ‘ana</p> <p>Extend understanding of fraction equivalence and ordering.</p> <p>(3.1)</p>	<p>4.NF.A.1</p>	<p>Wehewehe i ke kumu e like ai ka hakina a/e i ka hakina $(n \times a)/(n \times e)$ ma o ka ho‘ohana ‘ana i nā la‘ana hakina ‘ike maka ‘ia, me ka maliu ‘ana i ka ‘oko‘a o ka heluna a me ka nui o nā mahele ‘oiai he like ka nui o nā hakina ‘elua.</p> <p>Ho‘ohana i kēia lula no ka ho‘okū‘ike ‘ana a me ka ho‘opuka ‘ana i nā hakina kaulike. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā hakina o nā mahele~kinopiha 2, 3, 4, 5, 6, 8, 10, 12, 100.)</p>	<p>Kinopiha - Denominator</p>
		<p>4.NF.A.2</p>	<p>Ho‘ohālikelike i ‘elua hakina e ‘oko‘a nā ho‘ohelu a me nā mahele ‘oko‘a, e la‘a, ma ka haku ‘ana he mau mahele like a i ‘ole he mau ho‘ohelu like, a i ‘ole ma ka ho‘ohālikelike ‘ana i kekahi hakina kaha ana e like me $1/2$.</p> <p>Ho‘okū‘ike he pololei nā ho‘okūkū i ka manawa wale nō e pili ai ‘elua mau hakina i ka piha holo‘oko‘a~helu piha ho‘okahi (?). Palapala i ka hopena o ka ho‘ohālikelike ‘ana ma nā kaha $>$, $=$, a i ‘ole $<$, a hō‘oia‘i‘o i ka panina mana‘o, e la‘a, ma o ke kūkoku hakina ‘ikemaka ‘ia. (Kaupalena ‘ia ka pahuhopu o ka</p>	<p>Hakina Kaha Ana - Benchmark Fraction</p>

			<p>pae Papa 4 i nā hakina o nā mahele~kinopiha 2, 3, 4, 5, 6, 8, 10, 12, 100.)</p>	
	<p>Kūkulu i nā hakina mai nā hakina anakahi mai ma o ka ho'ohana 'ana a me ka ho'oloa 'ana i nā mea i maopopo 'ē e pili i nā hana ho'omākalakala o nā helu piha.</p> <p>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p> <p>(3.2)</p>	<p>4.NF.B.3</p>	<p>Maopopo ka hakina a/e nona ke a > 1 he huinanui o nā hakina 1/e.</p> <p>a. Maopopo ka ho'ohui 'ana a me ka ho'olawe 'ana i nā hakina 'o ia ke kāpili 'ana a me ka ho'oka'awale 'ana i nā 'apana o ka piha holo'oko'a ho'okahi.</p> <p>e. Wāwahi i ka hakina ma ka huinanui o kekahi mau hakina no lākou ka mahele ho'okahi ma nā 'ano hana like 'ole, me ka palapala 'ana i nā wāwahi pākahi ma ka ha'ihelu. Hō'oiā 'i'o i nā wāwahi 'ana, e la'a, ma o ka hō'ike 'ia 'ana i ka la'ana hakina 'ike maka 'ia. Nā la'ana: $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \ 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.</p> <p>i. Ho'ohui a ho'olawe i nā helu 'ō'ā e like nā mahele e la'a, ma o ke kuapo 'ana i nā helu 'ō'ā a pau me ka hakina heluna kaulike a/a i 'ole ma o ka ho'ohana 'ana i nā 'anopili hana ho'omākalakala a me ka pilina o ka ho'ohui 'ana a me ka lawe 'ana.</p> <p>o. Ho'omākalakala i nā nane ha'i e ho'ohui ana a e lawe ana i nā hakina e pili i ka piha holo'oko'a ho'okahi a e like ana nā mahele, e la'a, ma o ka ho'ohana 'ana i nā la'ana hakina 'ike maka 'ia a me nā ha'ihelu no ke hō'ike 'ana i ia nane ha'i.</p>	
		<p>4.NF.B.4</p>	<p>Ho'ohana a ho'olaulā i ka 'ike kahua i ka ho'onui 'ana no ka ho'onui 'ia 'ana o kekahi hakina e ka helu piha.</p> <p>a. Maopopo ka hakina a/e he helu māhua ia o 1/e. E la'a, ho'ohana i ka la'ana hakina 'ike maka 'ia no ka hō'ike 'ana i ka $5/4$ he hualoa'a ia o ka $5 \times (1/4)$, me ka palapala 'ana i ka ha'ihelu $5/4 = 5 \times (1/4)$.</p> <p>e. Maopopo ka helu māhua o a/e he helu māhua ia no 1/e, a ho'ohana i kēia 'ike no ka ho'onui 'ia 'ana o ka hakina e kekahi helu piha. E la'a, ho'ohana i ka la'ana hakina 'ike maka 'ia no ka hō'ike 'ana he $3 \times (2/5)$ 'oia nō $6 \times (1/5)$, me ka ho'okū'ike 'ana he hualoa'a kēia no $6/5$. (I ka mana'o laulā, $n \times (a/e) = (n \times a)/e$.)</p> <p>i. Ho'omākalakala i nā nane ha'i e ho'onui ana i ka hakina i kekahi helu piha, e la'a, ma ka ho'ohana 'ana i ka la'ana hakina</p>	

			<p>‘ike maka ‘ia a me nā ha‘ihelu no ke hō‘ike ‘ana i ka nane ha‘i. E la‘a, inā e ‘ai ana nā kākāka pākahi a pau ma ka pā‘ina he 3/8 paona ‘i‘o pipi a i ia pā‘ina ana 5 kākāka, ‘ehia paona ‘i‘o pipi e pono ai? Aia ka ha‘iloa‘a ma waena o nā helu piha ‘ehia?</p>
	<p>Maopopo nā helu kekimala o nā hakina, a ho‘ohālike i nā hakina kekimala.</p> <p>Understand decimal notation for fractions, and compare decimal fractions.</p> <p>(3.3)</p>	<p>4.NF.C.5</p> <p>Hō‘ike i kekahi hakina nona ka mahele he 10 e kaulike ana i ka hakina nona ka mahele he 100, a ho‘ohana i kēia ki‘ina hana no ka ho‘ohui ‘ana i ‘elua hakina no lāua nā kinopiha he 10 a he 100.</p> <p>E la‘a, hō‘ike i ka 3/10 ua like ia me 30/100, a laila ho‘ohui 3/10 + 4/100 = 34/100. (Ho‘omohala paha nā haumāna e hiki ke ho‘opuka i nā hakina kaulike i nā ka‘akālai no ka ho‘ohui ‘ana i nā hakina i ‘oko‘a ai nā mahele ma ka laulā. Akā ‘a‘ole ‘o ka ho‘ohui ‘ana a me ka ho‘olawe ‘ana i nā mahele ‘oko‘a he koina no kēia pae.)</p>	
		<p>4.NF.C.6</p> <p>Ho‘ohana i ke kauhelu kekimala no nā hakina no lākou nā kinopiha~mahele he 10 a i ‘ole he 100.</p> <p>E la‘a, kākau hou i ke 0.62 he 62/100: wehewehe i ke ana lō‘ihi he 0.62 mika; huli a loa‘a i kahi o 0.62 ma ke ki‘ikuhi laina helu. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā hakina o nā mahele~kinopiha 2, 3, 4, 5, 6, 8, 10, 12, 100.)</p>	
		<p>4.NF.C.7</p> <p>Ho‘okūkū i ‘elua kekimala a i ka hapa haneli ma o ka no‘ono‘o pono ‘ana i ko lāua nui. Ho‘okū‘ike i ka pololei o nā ho‘okūkū i ka manawa wale nō e pili ai ‘elua kekimala i ka piha holo‘oko‘a ho‘okahi.</p> <p>E palapala i ka hopena o nā ho‘okūkū ma nā hō‘ailona >, =, a i ‘ole < a hō‘oia‘i‘o i ka hopena, e la‘a, ma ka ho‘ohana ‘ana i kekahi la‘ana ‘ike maka. (Kaupalena ‘ia ka pahuhopu o ka pae Papa 4 i nā hakina o nā mahele~kinopiha 2, 3, 4, 5, 6, 8, 10, 12, 100.)</p>	
<p>Ke Ana ‘Ana a me ka ‘Ikepili/‘Ike</p> <p>Measurement and Data</p>	<p>Ho‘omākalakala i nā polopolema~nane pilihelu~nane ha‘i e pili i ke ana ‘ana a me ka ho‘ololi ‘ana i nā ana mai ke anakahi nui i ke anakahi li‘ili‘i.</p>	<p>4.MD.A.1</p> <p>‘Ike i ka pilina o nā anakahi o kekahi ‘onaehana anakahi; he pono nā kilomika, nā mika, nā kenimika; nā kilokalame, nā kalame; nā paona, nā ‘aunaki; nā lika, nā mililika; nā hola, nā mīnuka, nā kekona.</p> <p>I loko o ho‘okahi ‘onaehana anakahi, hō‘ike i nā mea i ana ‘ia ma ke anakahi nui a laila e ho‘ololi i ke anakahi li‘ili‘i mai. Palapala i nā mea i ana ‘ia ma ka pakuhi o ‘elua kolamu. He la‘ana: Maopopo ka</p>	

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. (4.1)		ho'okahi kapua'i he pā'umikūmālua i ka ho'okahi 'īniha. Hō'ike i ka lō'ihī o ka nahesa he 4 kapua'i ma 48 'īn. Kaha i ka pakuhi ho'ohulihuli no ke kapua'i a no ka 'īniha e helu papa ana i nā pa'a helu (1, 12), (2, 24), (3, 36)...	
	4.MD.A.2	Ho'ohana i nā hana ho'omākalakala 'ehā no ka ho'omākalakala 'ana i nā polopolema hua'ōlelo~mo'olelo nane ha'i e pili i ke ka'awale (ana), ka wā, ka pihanahaka, ka nuipa'a, a me ke kālā, a me ke komo pū 'ia 'ana o nā polopolema~nane ha'i~nane pilihelu o nā hakina ma'alaha a i 'ole nā kekimala ma'alaha, a me nā polopolema~nane pilihelu~nane ha'i e pono ai ka hō'ike 'ana i nā ana e hā'awi 'ia ma ke anakahi nui ma nā anakahi li'ili'i mai. Hō'ike i ka waiwai o ke ana ma nā ki'ikuhi e like me ke ki'ikuhi laina helu nona ka pālakio ana.	
	4.MD.A.3	Ho'ohana i nā ha'ilula 'ili a me nā ha'ilula anapuni no nā huinahā lō'ihī ma nā polopolema~nane pilihelu~nane ha'i o ka nohona a o ka makemakika~pilihelu. E la'a, e huli a loa'a ka laulā o ka lumi huinahā lō'ihī ke hō'ike 'ia ka 'ili o ka papahēle a me kona lō'ihī, ma o ka ho'omaopopo 'ana i ka ha'ilula 'ili ma ke 'ano he ha'ihelu ho'onui nona ka helu ho'onui i 'ike 'ole 'ia.	
Hō'ike i ke kū 'ana a wehewehe i ka 'ike~'ikepili. Represent and interpret data. (4.2)	4.MD.B.4	Kākuhi i pakuhi laina no ka hō'ike 'ana i ke kaina 'ikepili o nā ana ma nā hakina o kekahi anakahi (1/2, 1/4, 1/8). Ho'omākalakala i nā nane ha'i e pili i ka ho'ohui hakina a me ka lawe hakina ma o ka ho'ohana 'ana i ka 'ikepili ma nā pakuhi laina. E la'a, mai kekahi pakuhi laina, e huli a loa'a a laila e wehewehe i ka 'oko'a o ka lō'ihī o nā 'iniseka lō'ihī a me nā 'iniseka pōkole ma ka hō'ili'ilina 'iniseka.	
Ke Ana Anahonua - maopopo nā mana'o o nā huina a ana i nā huina	4.MD.B.5	Ho'omaopopo i nā huina he mau kinona anahonua e ho'okino 'ia ke hui 'elua kukuna ma ka piko ho'okahi, a maopopo ka mana'o o ke ana huina 'ana. a. Ana 'ia ka huina ma o ka nānā 'ana i ka pō'ai me kona kikowaena ma ke piko ho'okahi o nā kukuna, me ka nānā 'ana i	

	Geometric measurement—understand concepts of angle and measure angles. (4.3)		ka hakina o ka pi'o poepoe ma waena o nā kiko ma kahi e hui ai nā kukuna 'elua ma ka pō'ai. Kapa 'ia ka huina e ho'owili 'ia ana i ka 1/360 o ka pō'ai he "huina ho'okahi-kekelē," a ua hiki ke ho'ohana 'ia no ke ana 'ana i nā huina. e. He n kekelē ke ana 'ia 'ana o ka huina e ho'owili 'ia ana he n mau huina ho'okahi-kekelē.	
		4.MD.B.6	Ana i nā huina ma nā kekelē helu piha me ka ho'ohana 'ana i ke ana huina. Kaha ki'i i nā huina o ke ana i kuhikuhi pono 'ia.	
		4.MD.B.7	Ho'okū'ike i ke ana huina he hana ho'ohui. Ke wāwahi 'ia ka huina ma nā mahele 'ili'ili 'ole, 'o ke ana huina o ka piha holo'oko'a ka huinanui o nā ana huina o nā mahele a pau. Ho'omākalakala i nā nane ha'i ho'ohui a lawe e loa'a ka huina i 'ike 'ole 'ia ma ke ki'ikuhi ma nā nane ha'i o ka nohona a o ka pilihelu, e la'a, ma o ka ho'ohana 'ana i ka ha'ihelu nona ka hō'ailona e kū ana no ka huina i 'ike 'ole 'ia.	
Ke Anahonua Geometry	Kaha ki'i a ho'omaopopo i nā laina a me nā huina, a wae 'ano i nā kinona ma nā 'anopili o ko lākou mau laina a me huina. Draw and identify lines and angles, and classify shapes by properties of their lines and angles. (4.4)	4.G.A.1	Kaha i nā kiko, nā kaha, nā 'āpana kaha, nā kukuna, nā huina (kūpono, 'oi, peleleu), a me nā kaha kūpono a me nā kaha moe like. A ho'omaopopo i ia mau mea ma nā kinona papa.	
		4.G.A.2	Wae'ano i nā kinona papa ma o ka loa'a a i 'ole ka loa'a 'ole o nā kaha kūpono a i 'ole nā kaha kaulike, a i 'ole ka loa'a a i 'ole ka loa'a 'ole o nā huina o ke ana kiko'ī. Ho'okū'ike i nā huinakolu kūpono he 'ano mahele (e wae ai), a ho'omaopopo i nā huinakolu kūpono.	
		4.G.A.3	Ho'okū'ike i ke kaha 'ālikelike o kekahi kinona papa, he kaha ia e ho'ohapa ana i ia kinona i 'elua 'apana 'ano like, ma ke 'ano he mau aka. Ho'omaopopo i nā kinona kaha 'ālikelike a kaha ki'i i nā kaha 'ālikelike.	