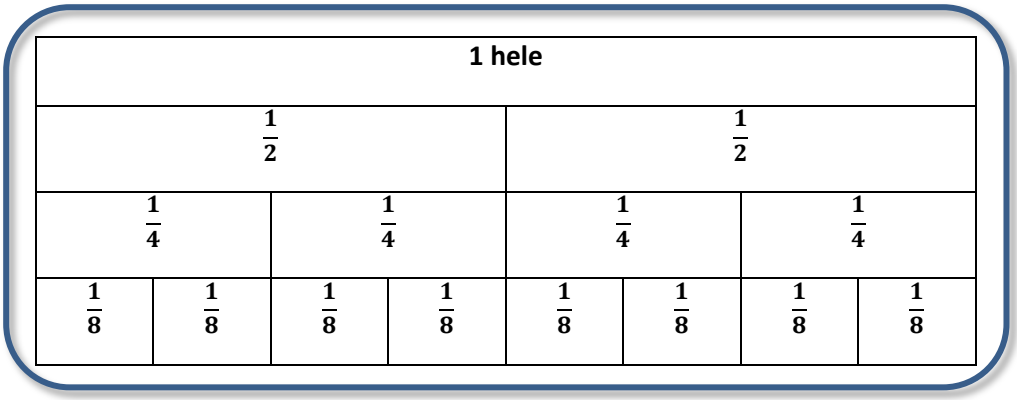
Werkkaart 2015-4AF- (VOORBEELD)

BREUKE

(1) Gebruik die tabel om die breuke te rangskik van die kleinste na die grootste.



(a)	$\frac{1}{2};\frac{1}{4};\frac{2}{2};\frac{1}{8}$ ➡	$\frac{1}{8},\frac{1}{4},\frac{1}{2},\frac{2}{2}$
(b)	$\frac{3}{4};\frac{1}{4};\frac{2}{4};\frac{1}{1}$ ➡	$\frac{1}{4},\frac{2}{4},\frac{3}{4},\frac{1}{1}$
(c)	$\frac{4}{4};\frac{1}{2};\frac{1}{4};\frac{3}{4}$ ➡	$\frac{1}{4},\frac{1}{2},\frac{3}{4},\frac{4}{4}$

(2) Skryf die breuke as gemengde breuke.

(1) $\frac{7}{4} = 1\frac{3}{4}$ (2) $\frac{9}{2} = 4\frac{1}{2}$ (3) $\frac{18}{5} = 3\frac{3}{5}$ (4) $\frac{27}{4} = 6\frac{3}{4}$

(5) $\frac{33}{4} = 8\frac{1}{4}$ (6) $\frac{25}{6} = 4\frac{1}{6}$ (7) $\frac{47}{6} = 7\frac{5}{6}$ (8) $\frac{40}{7} = 5\frac{5}{7}$

(3) Herskryf die gemengde breuke as onegte breuke

(1) $1\frac{1}{2} = \frac{3}{2}$ (2) $1\frac{1}{3} = \frac{4}{3}$ (3) $1\frac{1}{4} = \frac{5}{4}$ (4) $1\frac{1}{5} = \frac{5}{6}$

(5) $3\frac{1}{3} = \frac{9}{3}$ (6) $2\frac{2}{3} = \frac{8}{3}$ (7) $2\frac{3}{5} = \frac{13}{5}$ (8) $1\frac{1}{9} = \frac{10}{9}$

(4) Vermenigvuldiging van eenvoudige breuke

(a) $\frac{1}{4} \times \frac{3}{3} = \frac{\mathbf{3}}{12}$ (b) $\frac{1}{4} \times \frac{\mathbf{4}}{4} = \frac{\mathbf{4}}{16}$ (c) $\frac{1}{3} \times \frac{\mathbf{3}}{3} = \frac{\mathbf{3}}{9}$

(d) $\frac{4}{8} \times \frac{\mathbf{4}}{\mathbf{4}} = \frac{\mathbf{16}}{32}$ (e) $\frac{4}{7} \times \frac{\mathbf{5}}{\mathbf{5}} = \frac{\mathbf{20}}{35}$ (f) $\frac{3}{4} \times \frac{\mathbf{5}}{\mathbf{5}} = \frac{\mathbf{15}}{20}$

(5) Optel van breuke.

(a) $\frac{10}{15} + \frac{2}{5}$

$= \frac{\mathbf{10}}{\mathbf{15}} + \frac{\mathbf{1}}{\mathbf{5}} \times \frac{\mathbf{3}}{\mathbf{3}}$

$= \frac{\mathbf{10}}{\mathbf{15}} + \frac{\mathbf{3}}{\mathbf{15}}$

$= \frac{\mathbf{13}}{\mathbf{15}}$

(b) $\frac{1}{4} + \frac{3}{8}$

$= \frac{\mathbf{1}}{\mathbf{4}} \times \frac{\mathbf{2}}{\mathbf{2}} + \frac{\mathbf{3}}{\mathbf{8}}$

$= \frac{\mathbf{2}}{\mathbf{8}} + \frac{\mathbf{3}}{\mathbf{8}}$

$= \frac{\mathbf{5}}{\mathbf{8}}$

(c) $\frac{2}{6} + \frac{1}{3}$

$= \frac{\mathbf{2}}{\mathbf{6}} + \frac{\mathbf{1}}{\mathbf{3}} \times \frac{\mathbf{2}}{\mathbf{2}}$

$= \frac{\mathbf{2}}{\mathbf{6}} + \frac{\mathbf{2}}{\mathbf{6}}$

$= \frac{\mathbf{4}}{\mathbf{6}} = \frac{\mathbf{2}}{\mathbf{3}}$

(d) $\frac{1}{8} + 2\frac{1}{4} + 1\frac{10}{16}$

$= \frac{\mathbf{1}}{\mathbf{8}} + \frac{\mathbf{9}}{\mathbf{4}} + \frac{\mathbf{26}}{\mathbf{16}}$

$= \frac{\mathbf{1}}{\mathbf{8}} \times \frac{\mathbf{2}}{\mathbf{2}} + \frac{\mathbf{9}}{\mathbf{4}} \times \frac{\mathbf{4}}{\mathbf{4}} + \frac{\mathbf{26}}{\mathbf{16}}$

$= \frac{\mathbf{2}}{\mathbf{16}} + \frac{\mathbf{36}}{\mathbf{16}} + \frac{\mathbf{26}}{\mathbf{16}}$

$= \frac{\mathbf{64}}{\mathbf{16}}$

$= 4$

(e) $\frac{3}{4} + \frac{1}{20} + 1\frac{1}{5}$

$= \frac{\mathbf{3}}{\mathbf{4}} \times \frac{\mathbf{5}}{\mathbf{5}} + \frac{\mathbf{1}}{\mathbf{20}} + \frac{\mathbf{6}}{\mathbf{5}} \times \frac{\mathbf{4}}{\mathbf{4}}$

$= \frac{\mathbf{15}}{\mathbf{20}} + \frac{\mathbf{1}}{\mathbf{20}} + \frac{\mathbf{24}}{\mathbf{20}}$

$= \frac{\mathbf{40}}{\mathbf{20}}$

$= 2$

(f) $\frac{9}{15} + 1\frac{1}{3} + 1\frac{1}{15}$

$= \frac{\mathbf{9}}{\mathbf{15}} + \frac{\mathbf{4}}{\mathbf{3}} \times \frac{\mathbf{5}}{\mathbf{5}} + \frac{\mathbf{16}}{\mathbf{15}}$

$= \frac{\mathbf{9}}{\mathbf{15}} + \frac{\mathbf{20}}{\mathbf{15}} + \frac{\mathbf{16}}{\mathbf{15}}$

$= \frac{\mathbf{45}}{\mathbf{15}}$

$= 3$

(6) Woordsomme met breuke

(1) Daar is 42 kinders in die klas. $\frac{4}{6}$ van die kinders is meisies.

(a) Hoeveel meisies is daar? **28 meisies**

(b) Watter breukdeel is seuns? $\frac{\mathbf{2}}{\mathbf{6}}$

c) Hoeveel seuns is daar?

42 – 28 = 14