Math 4 Homework #12 **Expect a test any time!**

Solve in this handout

1. A bag may fit up to 12 cans of coke. How many bags are needed to carry 80 cans?

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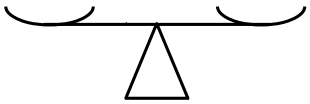
2. A fake coin weighs less than real ones. Using two cup balances find …

a). … the fake coin out of 3 in ***only 1*** weighing.



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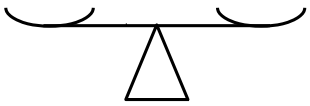
b). … the fake coin out of 9 in ***only 2*** weighing.



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3. Calculate:

$2 \times (-6) =$ $\frac{1}{3} \times 6 =$

$\frac{2}{3} \times 6 =$ $2 : (-6) =$

$\frac{1}{3} : (-6) =$ $\frac{2}{3} : (-6) =$

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

$\frac{2}{3} \times \frac{1}{6} =$ $2 : \left(-\frac{1}{6}\right) =$

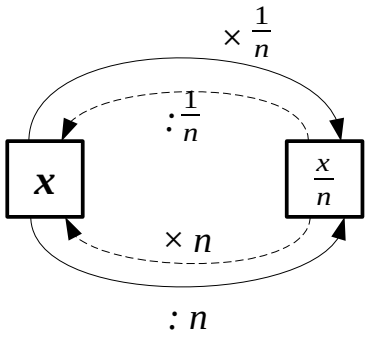
$\frac{1}{3} : \left(-\frac{1}{6}\right) =$ $\frac{2}{3} \times \left(-\frac{1}{6}\right) =$

Solve in your notebook

4. Show that …

… a). $(2 - 4\boldsymbol{x}) \times \frac{1}{2} + \left(\frac{1}{2}\boldsymbol{x} + \frac{1}{2}\right) : \frac{1}{4} = 3$

… b). $\left(\frac{1}{4} - \boldsymbol{w}\right) \cdot 2 + \left(\boldsymbol{w} - \frac{1}{6}\right) \cdot 3 = w$



5. Make Cartesian coordinates using ½ cm (1 cell) as a unit. Mark point ***D***(3, 2). Plot ***w*** = Circ(***D***, 5) (***r*** = 5 units = 2½ cm). Shade the cells that are completely inside the circle.

Put upper and lower limits on the area of the circle: _____ < ***S*** < _____

6. Solve the equations: (Answers: a). {– ⅔, 2} b). {–10, 30} c. ∅)

a). $|3\boldsymbol{x} - 2| = 4$ b). $\left|\frac{1}{5}x - 2\right| = 4$ c). $\left|\frac{1}{5}x - 2\right| = -4$

7. Solve equations:

a). $8 - 12\boldsymbol{x} = 4$ b). $8 - 12 : \boldsymbol{x} = 4$ c). $12 : (8 - \boldsymbol{x}) = 4$

Answers: (a). $\boldsymbol{x} = ⅓$ b). $\boldsymbol{x} = 3$ c). $\boldsymbol{x} = 5$)