

Solve in this handout

1. There is a fake coin among 9 coins. Use a two cup scale and no more than two weighings to find out whether the fake coin is heavier or lighter than the real ones?

2. Calculate:

$$\frac{1}{3} - \frac{3}{4} =$$

$$\frac{5}{8} + \frac{3}{4} =$$

$$\frac{3}{7} - \frac{5}{21} =$$

$$\frac{5}{12} - \frac{3}{16} =$$

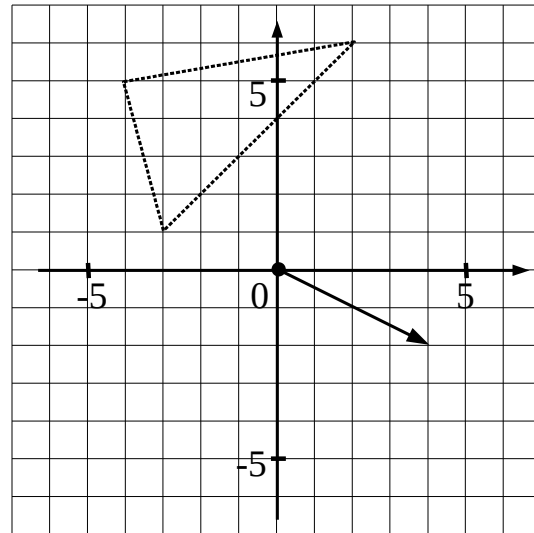
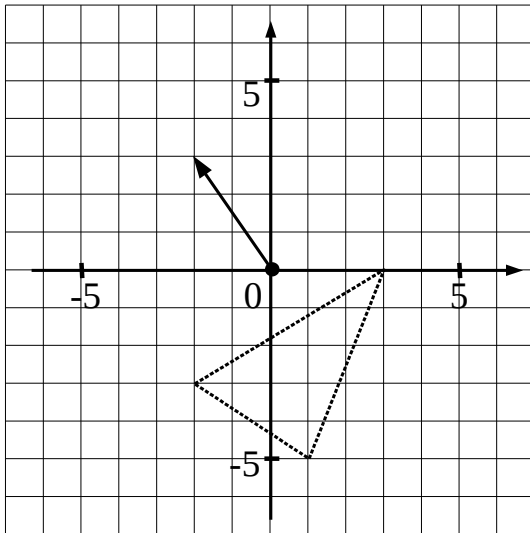
$$\left(-\frac{1}{2}\right) \cdot \frac{4}{9} =$$

$$\frac{5}{7} \times \frac{21}{15} =$$

$$\frac{3}{8} \cdot \frac{4}{9} =$$

$$\frac{1}{2} \cdot \frac{4}{5} \cdot \frac{15}{16} =$$

3. Move the shapes according to the instructions given by the arrows.



Solve in your notebook:

4. Show that ...

a) ... $(2x + 6) \times \frac{3}{4} - (3 + x) \cdot \frac{1}{2} = x + 3$

b) ... $(4x + y - 1) \cdot \frac{3}{5} - (2x + 3y + 2) : 5 = 2x - 1$

c) ... $(2x + 4y - 6) : 4 - \frac{1}{2} \cdot (x + 2y) - (\frac{1}{2} - x) = x - 2$

5. Solve the equations below.

a). $2 \cdot (3x - 4) + 3 \cdot (2 - x) = 2(x + 1) + 5$ $x = 9$

Remember:

$$|a| = a \text{ IF } a \geq 0;$$

$$|a| = a \cdot (-1) \text{ IF } a < 0$$

*b). $2x + |x| = x + 1$ $x = \frac{1}{2}$

*c). $|x| = 2 \cdot (\frac{1}{2} - x)$ $x = \frac{1}{3}$