

1. Calculate:

$$\frac{3}{20} \times \frac{5}{9} =$$

$$\frac{6}{7} \times \frac{1}{3} =$$

$$\frac{2}{3} \cdot \frac{5}{6} =$$

$$\frac{1}{4}x \cdot \frac{2}{3} =$$

$$3 \cdot \frac{2}{5}x =$$

$$12x \cdot \frac{1}{6} =$$

2. Calculate:

$$\frac{1}{2} : \frac{3}{4} =$$

$$\frac{1}{2} \times \frac{3}{4} =$$

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

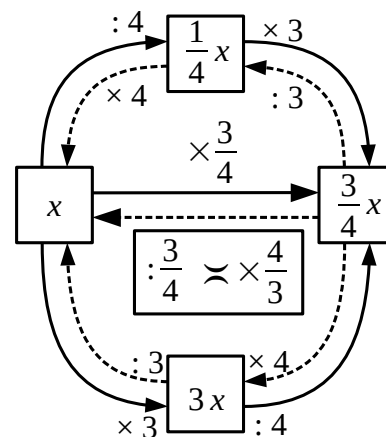
$$6 : \frac{2}{3} =$$

$$12 \times \frac{3}{4} =$$

$$12 : \frac{3}{4} =$$

$$7 : \frac{2}{7} =$$

$$7 \times \frac{2}{7} =$$



$$x : \frac{a}{b} = x \times \frac{b}{a}$$

$$: \frac{a}{b} \asymp \times \frac{b}{a}$$

3. Solve the equations:

a).  $2x + |x + 1| = 3$

b).  $\frac{2x+1}{x-1} = 4$

$$\frac{x-1}{2x+1} = 4$$

4. Solve the word problems:

a). A fill-up pipe can fill a swimming pool in 4 hours. Another pipe can do the same job in 3 hours. How long will it take to fill the pool if both pipes work together?

b). An old printer can produce all needed copies in 3 hours. A newer model can do the same job in 2 hours. How long will it take both printers to do the job together? What fraction of the work will each printer perform?

5. Expand decimal fractions: 0.12      0.02      0.102      1.102

6. Divide  $[AB]$  into two equal segments.

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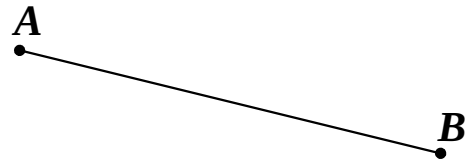
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7. Plot  $KM \perp AB$ .

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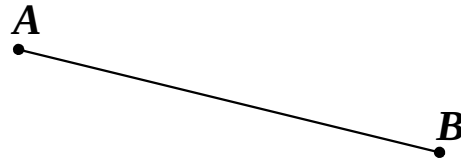
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• *K*



**Additional:**

Solve equations:

a).  $\frac{x+1}{2x-1} = 2$

b).  $2x + |x - 1| = 2$