

Warm-Up



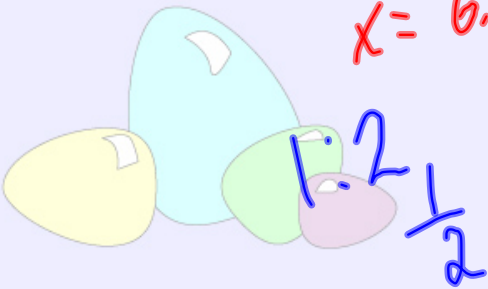
Solve

$$\overset{(3)}{\underline{x}} = \frac{15}{7.2} \overset{(3)}$$

$$x = \frac{45}{7.2}$$

$$x = 6.25$$

$$3 \cdot 6.25$$



ratio

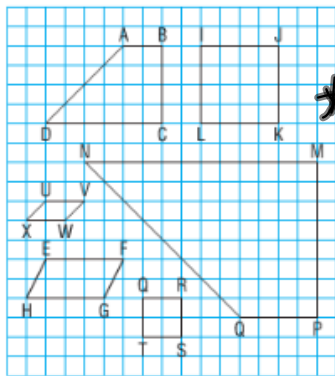
$$\frac{6.25}{3} = \frac{15}{7.2}$$

$$2.08\bar{3} = 2.08\bar{3}$$

$$3 \begin{array}{|l} \hline 6.25 \\ \hline \end{array}$$



6. Identify similar quadrilaterals. List their corresponding sides and corresponding angles.



List Corresponding sides

Ratio of corresponding sides

Corresponding angles

* MN matches CD
 MP || CB
 NA || DA
 * QP || AB

$\frac{CD}{MN} = \frac{6}{3} = 2$
 $\frac{MN}{CB} = \frac{3}{3} = 1$
 $\frac{MP}{DA} = \frac{3}{3} = 1$
 $\frac{NQ}{PA} = \frac{3}{3} = 1$
 $\frac{AB}{QP} = \frac{4}{2} = 2$
 $\frac{QP}{AB} = \frac{2}{4} = \frac{1}{2}$

$\frac{2}{6} = \frac{1}{3}$
 $\angle M = \angle C$
 $\angle P = \angle B$
 $\angle N = \angle D$
 $\angle Q = \angle A$

CD MN

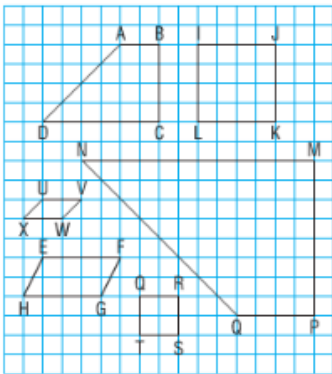
M

MNQP ~ CDA B Reduction

ABCD ~ QPMN Enlargement

$$\frac{MN}{CD} = \frac{MP}{CB} = \frac{NQ}{DA} = \frac{QP}{AB}$$
$$\frac{12}{6} = \frac{4}{2}$$
$$2 = 2$$

6. Identify similar quadrilaterals. List their corresponding sides and corresponding angles.



List Corresponding sides

IJ matches QR
 JK matches RS
 LK || TS
 IL || QT

Ratio of corresponding sides

$\frac{QR}{IJ}$
 $\frac{RS}{JK}$
 $\frac{TS}{LK}$
 $\frac{QT}{IL}$

Corresponding angles

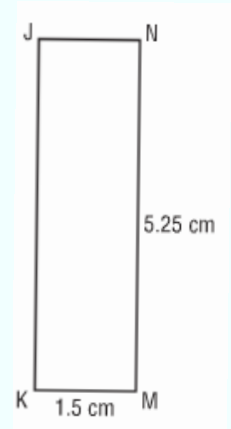
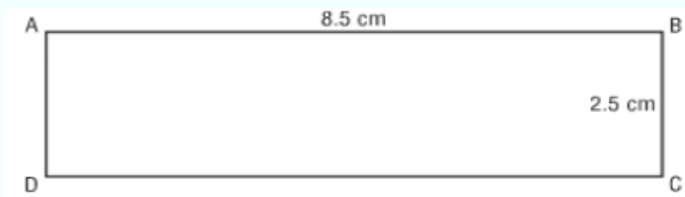
$\angle I = \angle Q$
 $\angle J = \angle R$
 \angle
 all angles are 90°

$$\frac{QR}{IJ} = \frac{RS}{JK} = \frac{TS}{LK} = \frac{QT}{IL}$$

$$\frac{4}{2} = \frac{4}{2}$$

$$2 = 2$$

Are these rectangles similar? Justify your answer.



List the corresponding sides?
What do you know about the angles?

Corresponding sides

AB corresponds NM
BC MK

$$\frac{NM}{AB} = \frac{MK}{BC}$$

angles ✓
ratio sides X

Not similar

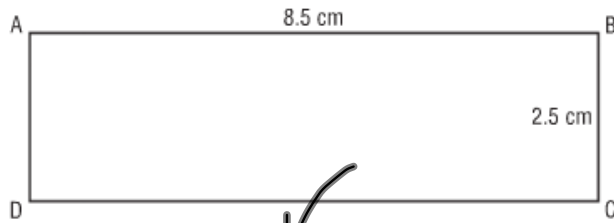
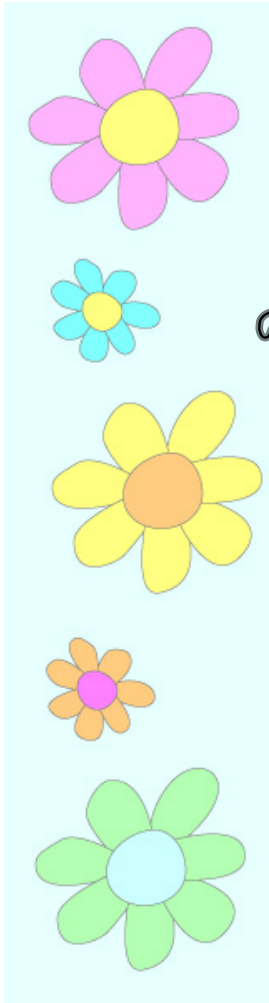
$$\frac{5.25}{8.5} = \frac{1.5}{2.5}$$

$$0.6176 \neq 0.6$$



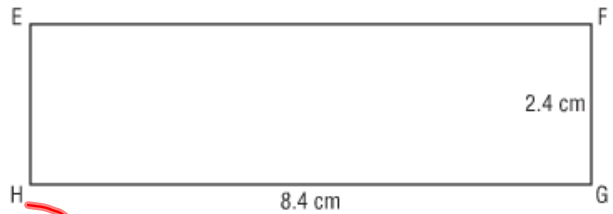
$$\frac{8.5}{5.25} = \frac{2.5}{1.5}$$

$$1.619 \neq 1.66$$



List the corresponding sides?
What do you know about the angles?

angles same ✓
ratio sides ✗



$$\frac{AB}{EF} = \frac{BC}{FG}$$

$$\frac{8.5}{8.4} = \frac{2.5}{2.4}$$

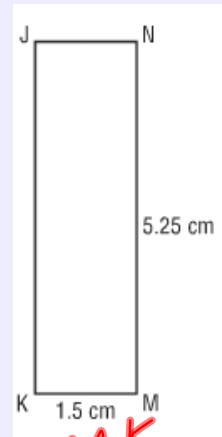
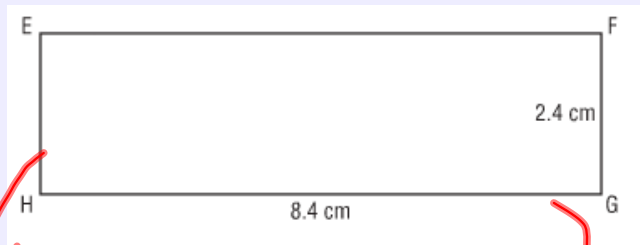
$$1.011 \neq 1.04$$

$$\frac{EF}{AB} = \frac{FG}{BC}$$

$$\frac{8.4}{8.5} = \frac{2.4}{2.5}$$

$$0.988 \neq 0.96$$

List the corresponding sides?
 What do you know about the angles?



angles ✓
 sides ✓

$$\frac{EF}{NM} = \frac{FG}{MK}$$

$$\frac{8.4}{5.25} = \frac{2.4}{1.5}$$

$$1.6 = 1.6$$

$$\frac{NM}{EF} = \frac{MK}{FG}$$

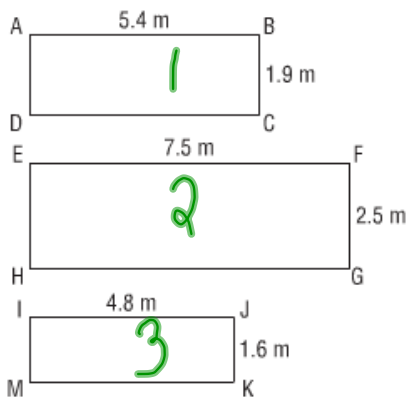
$$\frac{5.25}{8.4} = \frac{1.5}{2.4}$$

$$0.625 = 0.625$$

$EFGH \sim NMKJ$

Apply

9. Are any of these rectangles similar?
Justify your answer.



1 and 2

1 and 3

Page 341-42

#5, 9

#12 Grid paper

2 and 3

12. Assessment Focus Use grid paper.

Construct rectangles with these dimensions:

3 units by 4 units, 6 units by 8 units,

9 units by 12 units, and 12 units by

15 units

- a) i) Which rectangle is not similar to the other rectangles?

