

حل

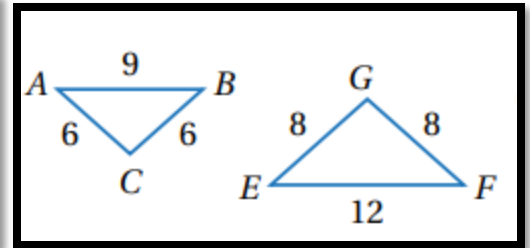
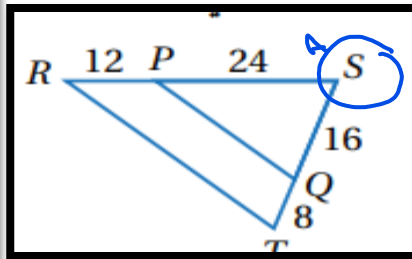
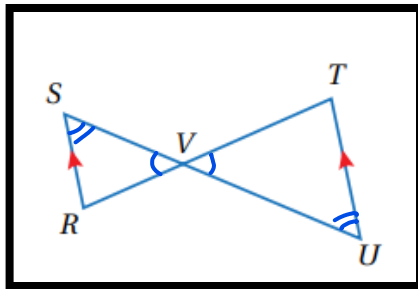
الفصل الدراسي الثاني/ ورقة عمل التشابه

الاسم :

الصف: الثامن

النشاط الاول :

حدد نوع التشابه في الحالات الآتية :



بما أن $\angle S = \angle U$ و $\angle R = \angle T$
بتبادل $\angle S = \angle U$ (AA)

(SAS)

$$\frac{SP}{SR} = \frac{SQ}{ST}$$

$$\frac{24 \div 12}{36 \div 12} = \frac{16 \div 8}{24 \div 8}$$

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

(SSS)

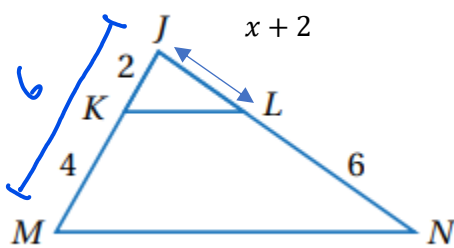
$$\frac{AB}{EF} = \frac{AC}{EG} = \frac{BC}{FG}$$

$$\frac{9}{12} = \frac{6}{8} = \frac{6}{8}$$

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

النشاط الثاني :

مستخدماً مفهوم التشابه احسب قيمة المتغير في الحالات التالية :



$\Delta KJL \sim \Delta MJN$ (1)

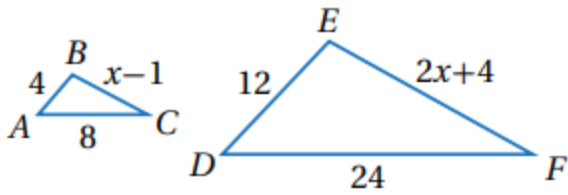
$$\frac{KJ}{MJ} = \frac{JL}{JN}$$

$$\frac{2 \div 2}{6 \div 2} = \frac{x+2}{x+2+6}$$

$$\frac{1}{3} = \frac{x+2}{x+8}$$

$$\rightarrow \begin{matrix} x+8 & = & 3x+6 \\ -x & - & -x \\ \hline 2 & = & 2x \end{matrix}$$

$$\boxed{x=1}$$



$$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF} \quad (2)$$

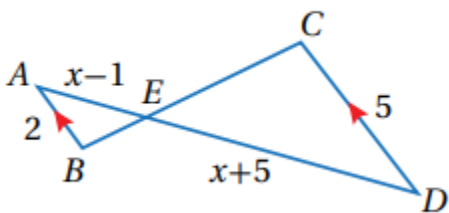
$$\frac{4 \div 4}{12 \div 4} = \frac{x-1}{2x+4}$$

$$\frac{1}{3} \neq \frac{x-1}{2x+4}$$

$$2x+4 = 3x-3$$

$$-2x+3 \quad -2x+3$$

$$\boxed{7 = x}$$



$$\frac{AB}{DC} = \frac{AE}{DE} \quad (3)$$

$$\frac{2}{5} \neq \frac{x-1}{x+5}$$

$$2x+10 = 5x-5$$

$$-2x+5 \quad -2x+5$$

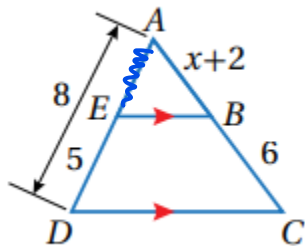
$$\frac{15}{3} = \frac{3x}{3}$$

$$\boxed{5 = x}$$

$\triangle ABE \sim \triangle DCE$

$\triangle ABE \sim \triangle ACD$

$AB = 3.6 \text{ cm}$



$$\frac{AB}{AC} = \frac{AE}{AD}$$

$$\frac{x+2}{x+8} \neq \frac{8-5}{8}$$

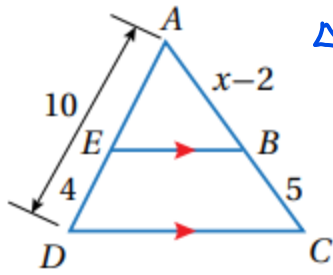
$$8x+16 = 3x+24$$

$$-3x-16 \quad -3x-16$$

$$5x = 8$$

$$x = \frac{8}{5} \rightarrow 1.6$$

(4)



$$\triangle ABE \sim \triangle ACD$$

(5)

$$\frac{AB}{AC} = \frac{AE}{AD}$$

$$\frac{x-2}{x-2+5} = \frac{10-4}{10}$$

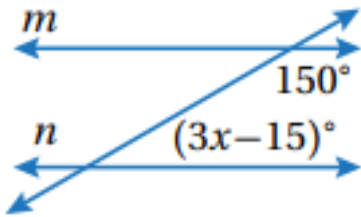
$$10x - 20 = 6x + 18$$

$$-6x \quad -6x$$

$$\frac{4x}{4} = \frac{38}{4}$$

$$x = 9\frac{3}{4}$$

$$x = 9.5$$



تقابل

(6) المستقيمان متوازيان :

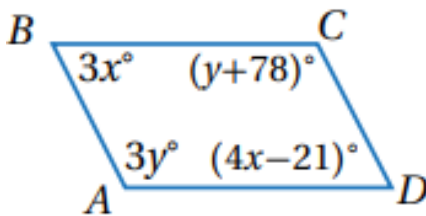
$$150 + 3x - 15 = 180$$

$$135 + 3x = 180$$

$$-135 \quad -135$$

$$\frac{3x}{3} = \frac{45}{3}$$

$$x = 15$$



متقابل

(7)

$$y + 78 = 3y$$

$$-y \quad -y$$

في المتوازيين متساوية

$$\frac{78}{2} = \frac{2y}{2}$$

$$y = 39$$

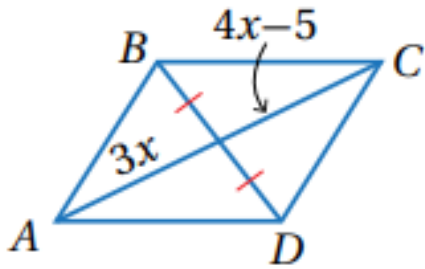
لا متقابل

$$4x - 21 = 3x$$

$$-3x \quad -3x$$

$$x - 21 = 0$$

$$x = 21$$

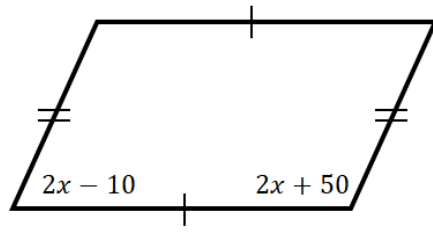


(8) الصفات الاقطار متساوية

$$4x - 5 = 3x$$

$$-3x \quad -3x$$

$$x - 5 = 0 \quad \boxed{x = 5}$$



(9)

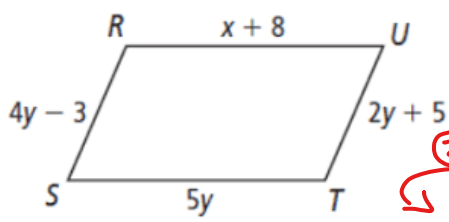
تألف $2x - 10 + 2x + 50 = 180$

$$4x + 40 = 180$$

$$-40 \quad -40$$

$$\frac{4x}{4} = \frac{140}{4}$$

$$\boxed{x = 35}$$



UT = RS

RS = ST

$$2y + 5 = 4y - 3$$

$$8 = 2y$$

$$\boxed{y = 4}$$

$$x + 8 = 5y$$

$$x + 8 = 5(4)$$

$$x + 8 = 20$$

$$\boxed{x = 12}$$

(10)