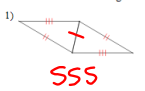
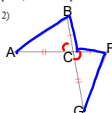
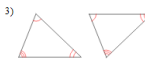


January 28, 2019, Monday
January 30, 2019 Wednesday

D Determine if the two triangles are congruent. If they are, state how you know.

1)  **SSS**

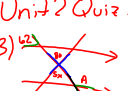
2)  **SAS**

3)  **Not Congruent**

4) for problem 2, write a congruence statement...
Triangle ABC ≅ Triangle **GFC**

Jan 24-7:52 AM

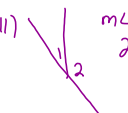
Unit 2 Quiz 1

3)  **vertical Ls**
 $5x = 80$
 $x = 16$

Alternat exterior Ls
 $2y = 62$
 $y = 31$


$x = 16, y = 31, A = 118$

2y + A = 180
 $2(31) + A = 180$
 $62 + A = 180$
 $-62 -62$
A = 118

11)  **Linear pair**
 $2x + 10x = 180$
 $12x = 180$
 $x = 15$

mL1 = 30 mL2 = 150

alt. int Ls: 3.6 OR 4.5
alt. ext Ls: 7.2 OR 1.8
transversal: t



Jan 30-12:05 PM

Unit 2 Test Part 1 Study Guide

1. Which theorems or rule are used to prove that two triangles are congruent?
SSS, ASA, AAS, SAS, HL

2. Consider the triangles shown. Which rule, if any, can be used to prove triangle congruency?
AAS, ASA, SAS, SSS

3. If $m\angle 1 = 45, m\angle 2 = 30$ in the diagram below, find $m\angle 3$ and $m\angle 4$.
 $\angle 1 + \angle 2 + \angle 3 = 180$
 $45 + 30 + \angle 3 = 180$
 $75 + \angle 3 = 180$
 $-\ 75 - 75$
 $\angle 3 = 105$

4. In the diagram below $m\angle 1 = 65, m\angle 4 = 3x + 5$. Find $m\angle 2$ and $m\angle 3$.
 $65 = 3x + 5$
 $60 = 3x$
 $20 = x$

5. Find $m\angle 3$ and $m\angle 2$, if $m\angle 1 = 85$ degrees.
 $\angle 1 + \angle 2 = 180$
 $85 + \angle 2 = 180$
 $-\ 85 - 85$
 $\angle 2 = 95$

6. Find $m\angle 1$ if $m\angle 2 = 5x$ and $m\angle 3 = 6x - 1$.
 $\angle 2 + \angle 3 = 180$
 $5x + 6x - 1 = 180$
 $11x - 1 = 180$
 $+\ 1 + 1$
 $11x = 181$
 $x = 16.45$

Jan 24-7:51 AM

7. $\triangle PQR$ and $\triangle STU$ are congruent triangles. Using this information, list the corresponding sides and corresponding angles.

8. For $\triangle EFG$ and $\triangle MNP$, it is known that $EG \cong MP, \angle G \cong \angle P$, and $FG \cong NP$. Determine if the triangles are congruent, and if so, by which type of congruency.

9. In this diagram, \overline{ED} is the perpendicular bisector of \overline{AB} . The two-column proof shows that $\triangle C$ is congruent to $\triangle C$. Fill in the missing pieces of the proof. Bank: $AD \cong BD$, Vertical Angles, Reflexive Property, SSS, SAS, HL, CPCTC

Step	Statement	Reason
1	\overline{ED} is the perpendicular bisector of \overline{AB}	Given
2	$AD \cong BD$	Definition of bisector
3	$\angle CDA \cong \angle CDB$	Vertical Angles
4	$CD \cong CD$	Reflexive Property
5	$\triangle ADC \cong \triangle BDC$	SAS
6	$\angle ACD \cong \angle BCD$	CPCTC
7	$AC \cong BC$	CPCTC

Jan 24-7:51 AM

11. Given: E is the midpoint of \overline{AC} and \overline{DB} . Bank: $\triangle ABE \cong \triangle CED$, vertical angles, Defn of midpoint $BE \cong ED$

Steps	Statements	Reasons
1	E is the midpoint of \overline{AC} and \overline{DB}	Given
2	$AE \cong EC$	Defn of midpoint
3	$BE \cong ED$	Defn of a midpoint
4	$\angle AEB \cong \angle CED$	Vertical Ls
5	$\triangle ABE \cong \triangle CED$	SAS

12. $\triangle DEF$ and $\triangle UVW$ are congruent triangles. Which statement is known to be true?
a. $\overline{DE} \cong \overline{UV}$ b. $\overline{DF} \cong \overline{UV}$ c. $\overline{DF} \cong \overline{VW}$ d. $\overline{DE} \cong \overline{VW}$

13. For $\triangle ABC$ and $\triangle DEF$, the following is given: $\angle C \cong \angle F, AB \cong DE$, and $BC \cong EF$. By which triangle congruence statement can it be proved that the triangles are congruent?
a. SSS c. ASA b. SAS d. It cannot be determined if the triangles are congruent.

14. $\triangle PQR$ and $\triangle XYZ$ are congruent triangles. Which statement is known to be true?
a. $\angle Q \cong \angle X$ b. $\angle W \cong \angle X$ c. $\angle V \cong \angle X$ d. $\angle Y \cong \angle Y$

15. Name one set of each type of angles below.

Corresponding: $\angle 8, \angle 3$
Alternate Interior: $\angle 2, \angle 7$
Alternate Exterior: $\angle 4, \angle 5$
Vertical: $\angle 4, \angle 3$
Same side interior: $\angle 4, \angle 8$

Jan 24-7:52 AM

16. Identify all angle measures.

vertical L are equal, correspond
 $41^\circ = \angle b = \angle 1 = \angle 3$
 $41^\circ + \angle 5 = 180$
 $41^\circ + \angle 5 = 180$
 $-\ 41 - 41$
 $\angle 5 = 139 = \angle 7 = \angle 4 = \angle 2$

17. Determine whether each pair of triangles is congruent. If so, give the congruence statement and explain why the triangles are congruent.

$\triangle RSP \cong \triangle QSP$ (SAS)
 $\triangle HIG \cong \triangle KIJ$ (AAS)
 $\triangle LNO \cong \triangle ANM$ (SAS)

Theorems about Lines and Angles

19. Name the relationship and then find the missing angle measures by solving.

$2x + 10 = 16$
 $2x + 10 = 8 + 2x$
 $-\ 10 - 10$
 $2x = -2$
 $x = -1$

$86 + 76 = 162$
 $-\ 16 - 16$
 $70 = 146$
 $-\ 70 - 70$
 $0 = 76$

$4x + 24 = 7x + 3$
 $-\ 4x - 4x$
 $24 = 3x + 3$
 $-\ 3 - 3$
 $21 = 3x$
 $7 = x$

$4(7) + 24 = 52$
 $7(7) + 3 = 52$
 $52 = 52$

$6(15) + 7 = 92$
 $3(15) + 38 = 83$
 $92 = 83$

$4x + 6 + 11x + 6 = 180$
 $15x + 12 = 180$
 $-\ 12 - 12$
 $15x = 168$
 $-\ 15 - 15$
 $x = 11.2$

$3x + 38 + 6x + 7 = 180$
 $9x + 45 = 180$
 $-\ 45 - 45$
 $9x = 135$
 $15 = x$

Jan 24-7:54 AM

You may skip any 2 problems, but they must be on different pages.

Please clear write SKIP on the problem.

If you do not skip any problems, all will be graded!

Good luck!

Jan 31-1:00 PM

Answer:

Geogebra dilations what is the scale factor? → What does the scale factor, k, do?

Geogebra dilations, change the scale factor → What happens when the scale is between 0-1, then 1, then greater than 1?

Geogebra dilations about the origin → Sketch two of the pictures you can create with this Geogebra file.

Jan 31-1:16 PM

January 29, 2019, Tuesday
January 31, 2019, Thursday

Fill in the missing information for each proof.

1. Given: $\overline{GH} \cong \overline{KL}$, $\angle G \cong \angle K$ and $\overline{GI} \cong \overline{KI}$

Prove: $\overline{HI} \cong \overline{LI}$

Statements	Reasons
1. $\overline{GH} \cong \overline{KL}$	1. Given
2. $\angle G \cong \angle K$	2. Given
3. $\overline{GI} \cong \overline{KI}$	3. Given
4. $\triangle GHI \cong \triangle KLI$	4. SAS
5. $\overline{HI} \cong \overline{LI}$	5. CPCTC

4. Given: $\overline{PM} \parallel \overline{NO}$, $\overline{MN} \parallel \overline{PO}$

Prove: $\overline{PM} \cong \overline{ON}$

Statements	Reasons
1. $\overline{PM} \parallel \overline{NO}$	1. Given
2. $\overline{MN} \parallel \overline{PO}$	2. Given
3. $\angle PMO \cong \angle NOP$	3. Alternate Int
4. $\angle MNO \cong \angle OPN$	4. Alternate Interior
5. $\overline{MO} \cong \overline{NO}$	5. Reflexive Property
6. $\triangle PMO \cong \triangle ONP$	6. ASA
7. $\overline{PM} \cong \overline{ON}$	7. CPCTC

...test, after we finish the SG!

Jan 24-7:50 AM

January 30, 2019, Wednesday

...highly missed from the test...

Jan 24-7:58 AM

11.1 Dilations

Essential Question: How does a dilation transform a figure?

Explore 1 Investigating Properties of Dilations

A dilation is a transformation that can change the size of a polygon but leaves the shape unchanged. It dilates the image of a figure and a scale factor which together determine the position and size of the image of a figure after the dilation.

Use $\triangle ABC$ and its image $\triangle A'B'C'$ after a dilation to answer the following questions.

1. Use a ruler to measure the following lengths. Measure to the nearest tenth of a centimeter.

$AB = 2$ cm $A'B' = 2$ cm
 $AC = 2$ cm $A'C' = 2$ cm
 $BC = 2$ cm $B'C' = 2$ cm

2. Use a protractor to measure the corresponding angles.

$m\angle A = ?$ $m\angle A' = ?$
 $m\angle B = ?$ $m\angle B' = ?$
 $m\angle C = ?$ $m\angle C' = ?$

3. Complete the following ratios.

$\frac{A'B'}{AB} = \frac{2}{2} = 1$ $\frac{A'C'}{AC} = \frac{2}{2} = 1$ $\frac{B'C'}{BC} = \frac{2}{2} = 1$

Reflect

1. What do you notice about the corresponding sides of the figures? What do you notice about the corresponding angles?

2. Discussion: What similarities are there between reflections, translations, rotations, and dilations? What is the difference?

Scanned by CamScanner

Jan 24-7:59 AM

Dilations/Translations Worksheet

Name: _____ Date: _____

Directions: Answer the following questions to the best of your ability. For the y-axis, use the same scaling as the x-axis.

1. In Math, the word dilate means to _____ or _____ a figure.

2. If a scale factor is less than 1, then your figure gets _____.

3. If a scale factor is greater than 1, then your figure gets _____.

4. Graph the dilated image of triangle PQR using a scale factor of 2 and $(0,0)$ as the center of dilation.

$P: \quad P': \quad$
 $Q: \quad Q': \quad$
 $R: \quad R': \quad$

5. Graph the dilated image of quadrilateral $MNOPQ$ using a scale factor of 2 and the origin as the center of dilation.

$M: \quad M': \quad$
 $N: \quad N': \quad$
 $O: \quad O': \quad$
 $P: \quad P': \quad$

Jan 24-8:00 AM

Name: _____ Date: _____

6. Graph the dilated image of triangle XYZ using a scale factor of 1.5 and (0,0) as the center of dilation.

X': _____ Y': _____
 Z': _____

7. Graph the dilated image of quadrilateral MNOP using a scale factor of 3/2 and the origin as the center of dilation.

M': _____ N': _____
 O': _____ P': _____

8. Describe the dilation of quadrilateral MNOP, using the origin as the center.

Jan 24-8:01 AM

Name: _____ Date: _____

9. The table below shows the coordinates of triangle RST and the coordinates of R' in triangle R'S'T'. Triangle R'S'T' is a dilation of triangle RST.

Triangle RST	Triangle R'S'T'
R (-2, -3)	R' (5, -9)
S (0, 2)	S'
T (2, -3)	T'

Part A
 What are the coordinates of point S' and point T'?

Answer S' = (____, ____)
 T' = (____, ____)

Part B
 On the grid below, draw triangle RST and triangle R'S'T'.

Jan 24-8:01 AM

Do the following problem with the class, then write down the process on the right:

Dilate $\triangle ADE$ if $A(-1, 1)$, $D(0, 2)$, $E(3, 1)$ by a scale factor of 2 from the origin.

A' (____) B' (____) C' (____) How do you do a dilation from the origin?

What are the important pieces of information given for a dilation?

Do the next 4 dilation problems. Check your answers with a neighbor.

1) Dilate $\triangle QRS$ if $Q(-1, 0)$, $R(1, 2)$, $S(2, 1)$ by a scale factor of 2 from the origin.

Q' (____) R' (____) S' (____)

2) Dilate $\triangle TRK$ if $T(-1, -2)$, $R(1, 0)$, $K(0, 1)$ by a scale factor of 3 from the origin.

T' (____) R' (____) K' (____)

3) Dilate $\triangle XYZ$ if $X(-4, 0)$, $Y(-4, 4)$, $Z(-2, 2)$ by a scale factor of $\frac{1}{2}$ from the origin.

X' (____) Y' (____) Z' (____)

4) Dilate $\triangle HAT$ if $H(-1, -1)$, $A(1, 0)$, $T(1, 2)$ by a scale factor of 2 from the point (1, 2).

H' (____) A' (____) T' (____)

Jan 24-8:01 AM

Observe and Study Figures. Independent Practice Problems

Complete all the problems.

1. Graph the image of rectangle PQRS after a dilation with a scale factor of 2, centered at the origin.

2. Graph the image of rectangle PQRS after a dilation with a scale factor of $\frac{1}{2}$, centered at the origin.

3. Graph the image of quadrilateral EFGH after a dilation with a scale factor of 2, centered at the origin.

4. Graph the image of quadrilateral PQRS after a dilation with a scale factor of 2, centered at the origin.

5. Graph the image of quadrilateral PQRS after a dilation with a scale factor of $\frac{1}{2}$, centered at the origin.

6. Graph the image of rectangle PQRS after a dilation with a scale factor of 2, centered at the origin.

7. Graph the image of triangle EFG after a dilation with a scale factor of 2, centered at the origin.

8. Graph the image of quadrilateral KLMN after a dilation with a scale factor of $\frac{1}{2}$, centered at the origin.

9. Graph the image of rectangle EFGH after a dilation with a scale factor of $\frac{1}{2}$, centered at the origin.

10. Graph the image of quadrilateral ABCD after a dilation with a scale factor of $\frac{1}{2}$, centered at the origin.

Jan 24-8:01 AM

January 31, 2019, Thursday

Graph the image of the figure using the transformation given.

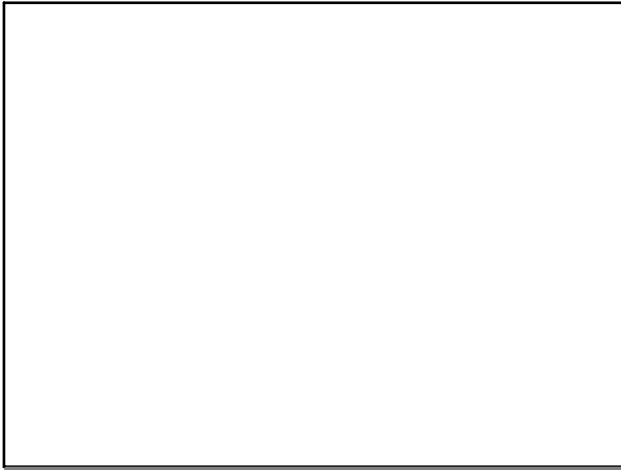
1) dilation of $\frac{1}{4}$ about the origin

2) dilation of 2 about the origin

Jan 24-8:06 AM

Find SIMILAR FIGURES HO

Jan 24-8:09 AM



Jan 24-9:32 AM

Geometry - 112 Day 9, 2/6/2017 2 Column Proofs for Similar Triangles

3 Methods for Proving 2 Triangles are Similar:

--	--

Fill in the blanks for each 2 column proof below.

1. Given: $\angle G \cong \angle K$, and $\angle I \cong \angle L$

Prove: $\triangle GHI \sim \triangle KLI$

Statements	Reasons
1. $\angle G \cong \angle K$	1. Given
2. $\angle I \cong \angle L$	2. Given
3. $\triangle GHI \sim \triangle KLI$	3. AA

2. Given: $\frac{MN}{PQ} = \frac{NO}{QR}$, $\angle M \cong \angle Q$

Prove: $\triangle MNO \sim \triangle PQR$

Statements	Reasons
1. $\frac{MN}{PQ} = \frac{NO}{QR}$	1. Given
2. $\angle M \cong \angle Q$	2. Given
3. $\triangle MNO \sim \triangle PQR$	3. SAS

3. Given: $\frac{ST}{UV} = \frac{TU}{VW}$, $\frac{US}{WV} = \frac{TW}{WX}$

Prove: $\triangle STU \sim \triangle VWX$

Statements	Reasons
1. $\frac{ST}{UV} = \frac{TU}{VW}$	1. Given
2. $\frac{US}{WV} = \frac{TW}{WX}$	2. SSS

4. Given: $\frac{AB}{DE} = \frac{BC}{EF}$, $\frac{AC}{DF} = \frac{AB}{DE}$

Prove: $\triangle ABC \sim \triangle DEF$

Statements	Reasons
1. $\frac{AB}{DE} = \frac{BC}{EF}$	1. Given
2. $\frac{AC}{DF} = \frac{AB}{DE}$	2. SSS

Jan 24-8:11 AM

5. Given: $\frac{MQ}{NP} = \frac{NQ}{MP}$

Prove: $\triangle MQN \sim \triangle PNM$

Statements	Reasons
1. $\frac{MQ}{NP} = \frac{NQ}{MP}$	1. Given
2. $\angle MQN \cong \angle PNM$	2. Alternate Interior
3. $\triangle MQN \sim \triangle PNM$	3. SAS

6. Given: $\frac{MQ}{NP} = \frac{NQ}{MP}$

Prove: $\triangle MQN \sim \triangle PNM$

Statements	Reasons
1. $\frac{MQ}{NP} = \frac{NQ}{MP}$	1. Given
2. $\angle MQN \cong \angle PNM$	2. Vertical Angles
3. $\triangle MQN \sim \triangle PNM$	3. SAS

7. Given: $\frac{GK}{HI} = \frac{GI}{HJ}$

Prove: $\triangle GKI \sim \triangle HJI$

Statements	Reasons
1. $\frac{GK}{HI} = \frac{GI}{HJ}$	1. Given
2. $\angle GKI \cong \angle HJI$	2. Corresponding Angles
3. $\triangle GKI \sim \triangle HJI$	3. SAS

8. Given: $\frac{AB}{DE} = \frac{BC}{EF}$

Prove: $\triangle ABC \sim \triangle DEF$

Statements	Reasons
1. $\frac{AB}{DE} = \frac{BC}{EF}$	1. Given
2. $\angle B \cong \angle E$	2. Corresponding Angles
3. $\triangle ABC \sim \triangle DEF$	3. SAS

9. Given: $\angle A \cong \angle B$

Prove: $\triangle ABC \sim \triangle BDC$

Statements	Reasons
1. $\angle A \cong \angle B$	1. Given
2. $\angle C \cong \angle C$	2. Vertical Angles
3. $\triangle ABC \sim \triangle BDC$	3. AA

Jan 24-8:11 AM

Create your own 2 column proof for the following similar triangles.

10. Given: $\angle S \cong \angle T$

Prove: $\triangle STU \sim \triangle TVW$

Reasons	Statements
1.	
2.	
3.	

11. Given: $\frac{GH}{IJ} = \frac{GI}{HJ}$, $\angle G \cong \angle I$

Prove: $\triangle GHI \sim \triangle IJL$

Reasons	Statements

12. Given: $\angle M \cong \angle P$, $\angle O \cong \angle Q$

Prove: $\triangle MNO \sim \triangle PQR$

Reasons	Statements

13. Given: $\frac{AB}{DE} = \frac{BC}{EF}$, $\angle ACB \cong \angle E$

Prove: $\triangle ABC \sim \triangle DEF$

Reasons	Statements

Jan 24-8:12 AM

14. Given: $\frac{AB}{FD} = \frac{BC}{DE}$, $\frac{AC}{FE} = \frac{AB}{FD}$

Prove: $\triangle ABC \sim \triangle FDE$

Reasons	Statements

15. Given: $\frac{MQ}{NP} = \frac{NQ}{MP}$

Prove: $\triangle MQN \sim \triangle PNM$

Reasons	Statements

16. Given: $\frac{NO}{PQ} = \frac{NQ}{MP}$

Prove: $\triangle MNO \sim \triangle PNM$

Reasons	Statements

17. Given: $\frac{AB}{DC} = \frac{AC}{CE}$, $\frac{AD}{DE} = \frac{AB}{DC}$

Prove: $\triangle ABC \sim \triangle CDE$

Reasons	Statements

Jan 24-8:12 AM

Your turn...

Geometry Name: _____ ID: 1
 Triangle Similarity, SAS, SSS, AA???

State if the triangles in each pair are similar.

1) $\triangle PQR \sim \triangle GHI$

2) $\triangle DEF \sim \triangle GHI$

3) $\triangle UVW \sim \triangle RST$

4) $\triangle EFG \sim \triangle HJK$

Jan 24-8:12 AM

State if the triangles in each pair are similar. If so, state how you know they are similar.

5) 6) $\triangle LMN \sim \triangle QRP$

7) $\triangle TSR \sim \triangle CRJ$ 8) $\triangle JKL \sim \triangle LUTS$

9) 10)

State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

9) 10)

$\triangle JKL \sim$ _____
 $\triangle KLM \sim$ _____

© 2013 Holt Rinehart and Winston. All rights reserved. May not be reproduced without permission.

Jan 24-8:13 AM

11) 12)

$\triangle FGH \sim$ _____
 $\triangle DEF \sim$ _____

Solve for x . The triangles in each pair are similar.

13) $\triangle JKL \sim \triangle EDC$ 14) $\triangle TUJ \sim \triangle TFG$

$\frac{25}{9} = \frac{x}{12}$
 $\frac{30}{12} = \frac{35}{3x+12}$

© 2013 Holt Rinehart and Winston. All rights reserved. May not be reproduced without permission.

Jan 24-8:13 AM

15) $\triangle TSR \sim \triangle LMN$ 16) $\triangle DCR \sim \triangle LMN$

Find the missing length. The triangles in each pair are similar.

17) $\triangle LUTS \sim \triangle UDE$ 18) $\triangle PQR \sim \triangle EDC$

19) $\triangle KLM \sim \triangle ABC$ 20) $\triangle DEF \sim \triangle MLK$

© 2013 Holt Rinehart and Winston. All rights reserved. May not be reproduced without permission.

Jan 24-8:14 AM

February 1, 2019, Friday

What are the 3 ways to prove triangle similarity?
 Write an example of a set of triangles using one of the ways...

Jan 24-8:20 AM

FIND PARALLEL LINES REVIST#ED

Jan 24-8:22 AM

Jan 24-8:23 AM