2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

(Attach one WORK DESCRIPTION to each piece in the portfolio.)

Student's Name: Student Name **Date work was produced:** 5-23-11

The Mathematics competency portfolio must include:

- Work samples with a minimum of four examples or problems solved by the student for each learning standard listed below.
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- A score (% accurate) for each piece of student work.
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☐	**Number Sense and Operations**	☐ 10.N.1	☐ 10.N.2			
☐	**Patterns, Relations, and Algebra**	☐ 10.P.2	☐ 10.P.4	☐ 10.P.5	☐ 10.P.7	
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	(Choose any three) ☐ 10.G.7 ☐ 10.G.8	☐ 10.G.9	☐ 10.G.10	☐ 10.G.11		
☐	**Measurement** ☐ 10.M.1	☐ 10.M.2	☐ 10.M.3			
☐	**Data Analysis, Statistics, and Probability**		☐ 10.D.1	☐ 10.D.2		

ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 100 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

REVIEW DEFINITION OF CONGRUENCY

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

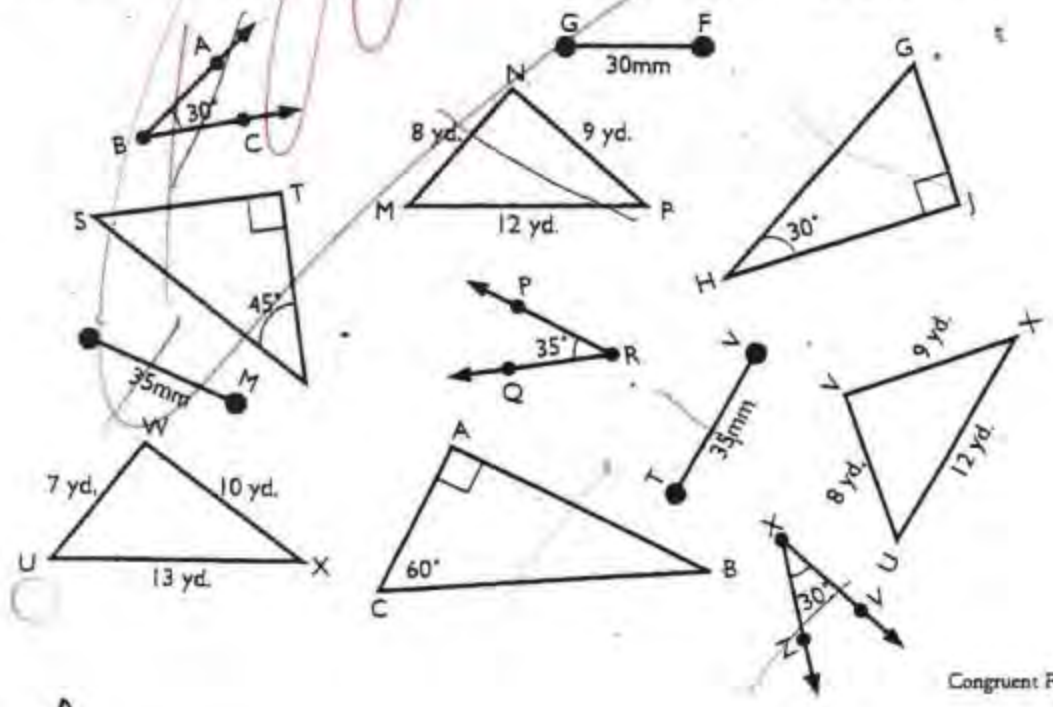
IDENTIFY CONGRUENT FIGURES AND CORRESPONDING PARTS OF CONGRUENT TRIANGLES

Self-evaluation (optional) - continue on back, if needed:

Name: Student Name Date: 5/23/11

Look at all the figures. Find the four pairs of congruent figures. List each pair of figures using appropriate symbols. 10.G.4

1. $\angle ABC \cong \angle ZXV$
2. $\overline{TM} \cong \overline{TH}$
3. $\triangle GJH \cong \triangle BAC$
4. $\triangle MAP \cong \triangle UVX$



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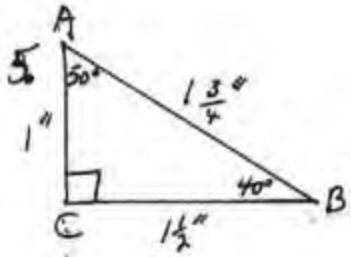

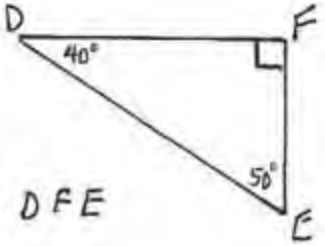

Triangle ACB and Triangle DFE are Congruent

CORRESPONDING PARTS

1. $\angle DFE = \angle ACB$
2. $\overline{DE} = \overline{AB}$
3. $\angle DEF = \angle CAB$.
4. $\overline{DF} = \overline{CB}$
5. $\angle FDE = \angle ABC$
6. $\overline{EF} = \overline{AC}$

Please Label all 6 of The corresponding Parts on Triangle DFE

Student Comments: IT IS EASY.

2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

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Student's Name: Student Name **Date work was produced:** 5-25-11

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☐	**Data Analysis, Statistics, and Probability**		☐ 10.D.1	☐ 10.D.2		

ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 90 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

DEFINITION OF SIMILARITY APPLIED TO TRIANGLES

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

IDENTIFY SIMILAR TRIANGLES USING THE DEFINITION; FIND CORRESPONDING SIDES OF SIMILAR TRIANGLES

Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

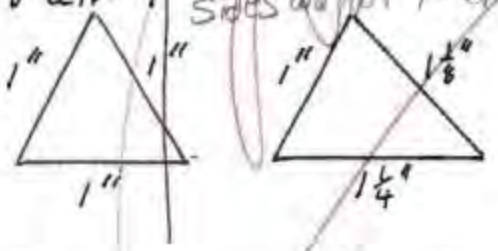
Name: Student Name

Date: 5/23/2011

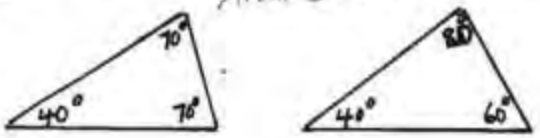
Similar Triangles

which Triangles are similar 10.G.4

Pair 1 NO because corresponding sides are NOT proportional

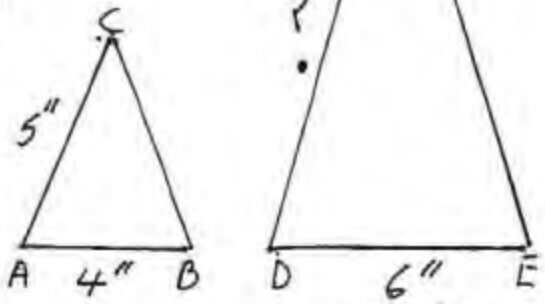


Pair 2 NO because corresponding ANGLES are NOT congruent



Pair 3 YES because corresponding sides are in proportion

4.)



△ABC is similar to △DEF

Find side DF

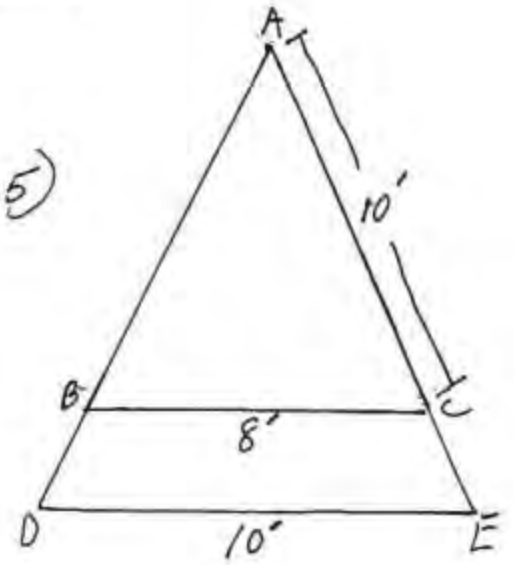
$\frac{FD}{CA} = \frac{DE}{AB}$

$\frac{FD}{5} = \frac{6}{4}$

$\frac{4FD}{4} = \frac{30}{4}$

[FD = 7.5] STUDENT COMMENT FAIRLY EASY

5)



Find side AE

$\frac{DE}{BC} = \frac{AE}{10}$

$\frac{100}{8} = \frac{8AE}{8}$

[AE = 12.5]

2011 MCAS Portfolio Appeal

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	☐ 10.G.7	☐ 10.G.8	☐ 10.G.9	☐ 10.G.10	☐ 10.G.11	
☐ Measurement	☐ 10.M.1	☐ 10.M.2	☐ 10.M.3			
☐ Data Analysis, Statistics, and Probability		☐ 10.D.1	☐ 10.D.2			

ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 91 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

USE OF A CALCULATOR; A BRIEF REVIEW OF RATIO AND PROPORTIONS

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

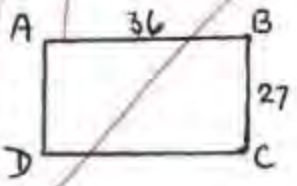
FIND THE LENGTHS OF CORRESPONDING SIDES OF SIMILAR POLYGONS USING PROPORTIONS

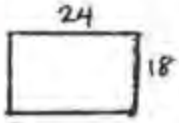
Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

Student's Name Student Name Date 5/23/2011 10. G. 4

Are the polygons similar? If they are, write a similarity statement (a proportion) and give the similarity ratio.

1.





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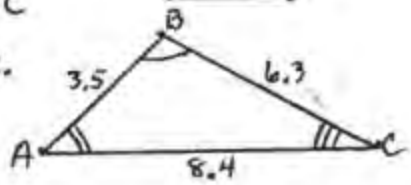
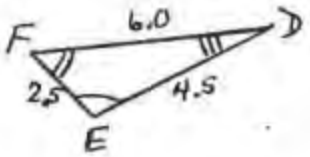
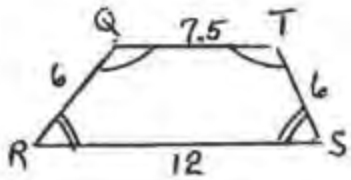
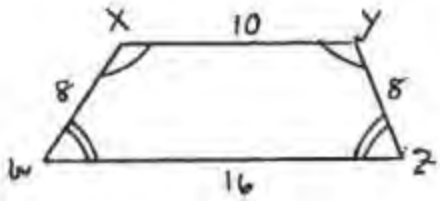




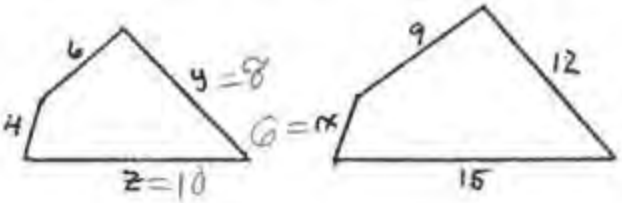
3.



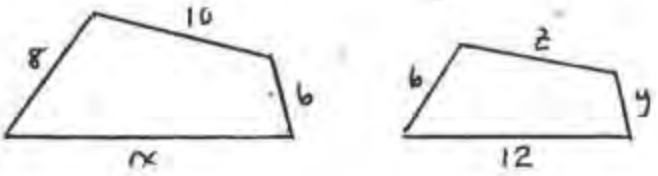


The polygons are similar. Find the values of the variables.

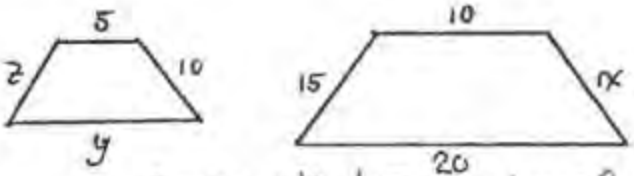
4.



5.



6.



STUDENT COMMENT IT ISEASY BUT IT LONG.

Student Name
5/23/2021

(1) $\frac{36}{27} = \frac{24}{18}$

$648 = 648$

Yes - That are similar ✓

Similarity Ratio

$\frac{36}{24} = \frac{18}{12} = \frac{9}{6} = \boxed{\frac{3}{2}}$ ✓

$\frac{27}{18} = \boxed{\frac{3}{2}}$ ✓

(2) $\frac{8:4}{6:0} = \frac{6:3}{4:5}$

$37.8 = 378$

Yes they are similar ✓

Similar Ratio ✓

$\frac{3:5}{2:5} = \boxed{1.4}$ ✓

$\frac{8:4}{6:0} = \boxed{1.4}$ ✓

(3) $\frac{18}{16} = \frac{7.5}{10}$

$180 = 180$

Yes they are similar

Similar Ratio ✓

$\frac{16}{12} = \boxed{\frac{4}{3}}$ ✓

$\frac{8}{0} = \boxed{\frac{4}{3}}$ ✓

(4) $\frac{6}{9} = \frac{Y}{12}$

$\frac{9Y}{9} = \frac{72}{9}$

$\boxed{Y = 8}$

$\frac{4}{X} = \frac{6}{9}$

$\frac{36}{6} = \frac{6X}{6}$

$\boxed{6 = X}$

$\frac{Z}{9} = \frac{15}{9}$

$\frac{9Z}{9} = \frac{90}{9}$

$\boxed{Z = 10}$

(5) $\frac{10}{Z} = \frac{8}{6}$

$\frac{60}{8} = \frac{8X}{8}$

$\boxed{Z = 7.5}$

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

$\frac{6X}{6} = \frac{96}{6}$

$\boxed{X = 16}$

$\frac{6}{Y} = \frac{8}{6}$

$\frac{36}{8} = \frac{8Y}{8}$

$\boxed{4.5 = Y}$

⑥ $\frac{Z}{15} = \frac{5}{10}$

$\frac{10Z}{10} = \frac{75}{10}$

$\boxed{Z = 7.5}$

$\frac{X}{10} = \frac{10}{5}$

$\frac{X5}{5} = \frac{100}{5}$

$\boxed{X = 20}$

$\frac{20}{Y} = \frac{10}{5}$

$\frac{100}{10} = \frac{10Y}{10}$

$\boxed{10 = Y}$

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ON THE ATTACHED PIECE:

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How much was done independently by the student? **(Level of Independence =** 90 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

HOW TO SET UP PROPORTIONS TO FIND THE MEASURES

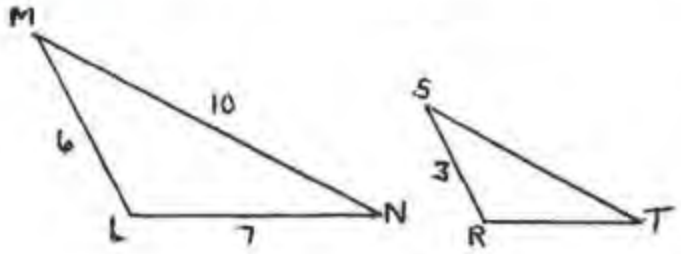
What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

FIND THE CORRESPONDING MEASUREMENT OF SIMILAR TRIANGLES

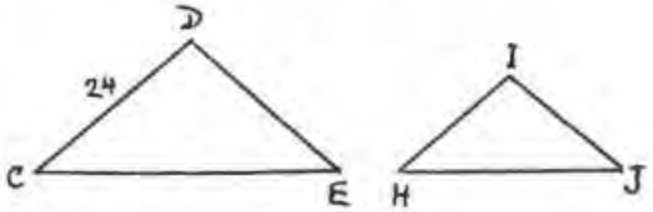
Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

Student's Name Student Name Date 5/24/2011 10 . G. 4

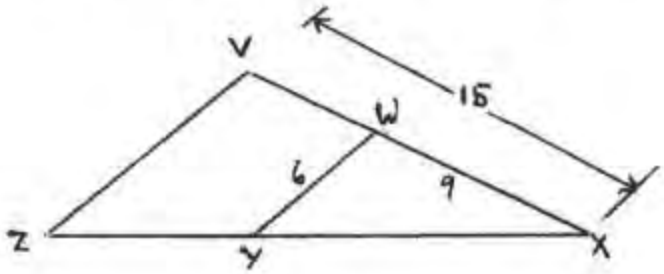
1. Triangles LMN and RST are similar. Find the missing lengths of ST and RT.



2. Triangles CDE and HIJ are similar and the ratio of corresponding sides is 3 to 2. Find the length of side HI IF CD = 24.



3. Find the length of side VZ if WY = 6, VX = 15, and WX = 9.



STUDENT COMMENT It is Easy.

Student Name 5/24/2011

(1) $\frac{ML}{SR} = \frac{MN}{ST}$

$\frac{6}{3} = \frac{30}{ST}$

$\frac{6ST}{6} = \frac{30}{6}$

$ST = 5$

(2) $\frac{3}{2} = \frac{24}{HI}$

$\frac{3HI}{3} = \frac{48}{3}$

$HI = 16$

(3) $\frac{VZ}{NY} = \frac{VX}{NX}$

$\frac{9VZ}{9} = \frac{90}{9}$

$VZ = 10$

(4) $\frac{Ln}{RT} = \frac{ML}{SR}$

$\frac{7}{RT} = \frac{6}{3}$

$\frac{6RT}{6} = \frac{21}{6}$

$RT = 3.5$

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ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 80 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

REVIEW THE GEOMETRIC FACT THAT THE SUM OF THE ANGLES OF ANY TRIANGLE IS 180°; USE OF A CALCULATOR

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

FIND THE MEASURE OF ANGLES IN GIVEN TRIANGLES

Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

Angles and Triangles

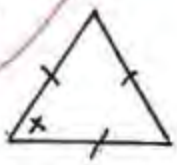
Name: Student Name
Date: 5/24/2011

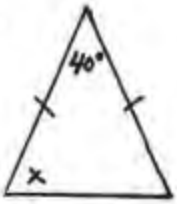
Find the missing angle Labeled X 10.G.5

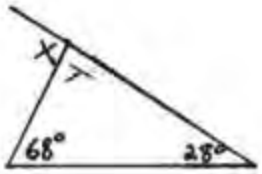
1. 

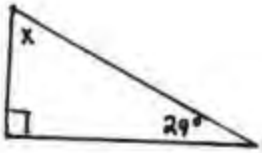
2. 

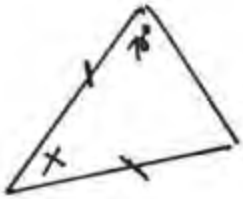
3. 

4. 

5. 

6. 

7. 

8. 

Student Comment EASY...

Student Name 5/24/2011

(1) $m\angle X + 55^\circ + 60^\circ = 180$
$m\angle X + 115^\circ = 180$
$-115 \quad -115$
$m\angle X = 65^\circ$

(2) $m\angle Y + 38^\circ + 75^\circ = 180$
$m\angle Y + 113^\circ = 180$
$-113 \quad -113$
$m\angle Y = 67^\circ$

$m\angle X + 67^\circ = 180$
$-67 \quad -67$
$m\angle X = 113^\circ$

(3) $m\angle X + 45^\circ + 90^\circ = 180$
$m\angle X + 135 = 180$
$-135 \quad -135$
$m\angle X = 45^\circ$

(4) $m\angle X + \overset{m\angle}{X} + \overset{m\angle}{X} = 180$
$\frac{3m\angle X}{3} = \frac{180}{3}$
$m\angle X = 60^\circ$

(5) $m\angle X + \angle X + 40^\circ = 180$
$2\,m\angle X + 40^\circ = 180$
$-40 \quad -40$
$\frac{2m\angle X}{2} = \frac{140}{2}$
$m\angle X = 70^\circ$

(6) $m\angle Y + 68^\circ + 28^\circ = 180$
$m\angle Y + 96 = 180$
$-96 \quad -96$
$m\angle X = 84^\circ$

(7) $m\angle X + 29^\circ + 90^\circ = 180$
$m\angle X + 119 = 180$
$-119 \quad -119$
$m\angle X = 61^\circ$

(8) $m\angle X + 70^\circ + 70^\circ = 180$
$m\angle X + 140^\circ = 180$
$-140 \quad -140$
$m\angle X = 40$

2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

(Attach one WORK DESCRIPTION to each piece in the portfolio.)

Student's Name: Student Name **Date work was produced:** 5-24-11

The Mathematics competency portfolio must include:

- Work samples with a minimum of four examples or problems solved by the student for each learning standard listed below.
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- A score (% accurate) for each piece of student work.
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(Choose any three) ☐ 10.G.7 ☐ 10.G.8	☐ 10.G.9	☐ 10.G.10	☐ 10.G.11			
☐ **Measurement** ☐ 10.M.1	☐ 10.M.2	☐ 10.M.3				
☐ **Data Analysis, Statistics, and Probability**		☐ 10.D.1	☐ 10.D.2			

ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 95 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

HOW TO SIMPLIFY RADICALS WITH PERFECT SQUARE FACTORS.

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

FIND THE HYPOTENUSE AND LEGS OF VARIOUS RIGHT TRIANGLES USING THE PYTHAGOREAN THEOREM

Self-evaluation (optional) - continue on back, if needed: OK EVIDENCE

Name Student Name Class _____ Date 5/24/2011

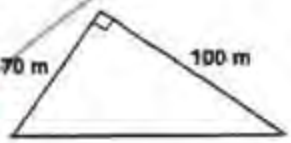
Practice 5-3

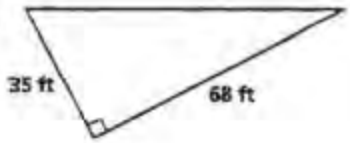
Example Exercises 10. G. 5

Example 1

Find the length of the hypotenuse. Use your calculator and round your answer to the nearest whole number.

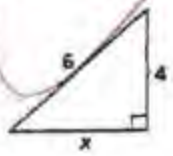
1. 

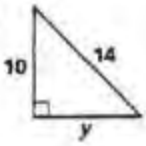
2. 

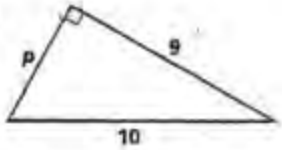
3. 

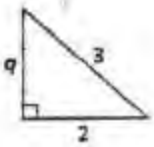
Example 2

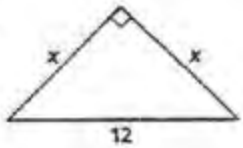
Find the value of the variable. Leave your answer in simplest radical form.

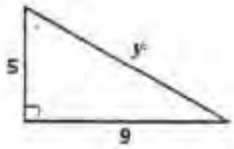
4. 

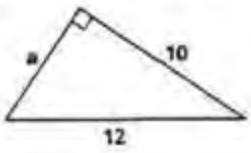
5. 

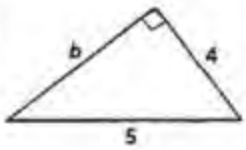
6. 

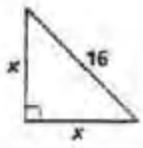
7. 

8. 

9. 

10. 

11. 

12. 

Student comments: I have problem and TWO problem in radical form

Student Name 5-24-11

(1) $c^2 = a^2 + b^2$
$c^2 = 18^2 + 34^2$
$c^2 = 324 + 1,156$
$\sqrt{c^2} = \sqrt{1,480}$
$c = \sqrt{1,480} \approx 38.4 = \boxed{38}$

(2) $c^2 = a^2 + b^2$
$c^2 = 100^2 + 70^2$
$c^2 = 10,000 + 4,900$
$\sqrt{c^2} = \sqrt{14,900}$
$c = \sqrt{14,900} \approx 122.0 = \boxed{122}$

(3) $c^2 = a^2 + b^2$
$c^2 = 68^2 + 35^2$
$c^2 = 4,624 + 1,225$
$\sqrt{c^2} = \sqrt{5,849}$
$c = \sqrt{5,849} \approx 76.4 = \boxed{76}$

(4) $c^2 = a^2 + b^2$
$6^2 = 4^2 + x^2$
$36 = 16 + x^2$
$-16 \quad -16$
$x^2 = 20$
$\sqrt{x^2} = \sqrt{20}$
$x = \sqrt{20} = \sqrt{4 \cdot 5} = \boxed{2\sqrt{5}}$

(5) $c^2 = a^2 + b^2$
$14^2 = 10^2 + y^2$
$196 = 100 + y^2$
$-100 \quad -100$
$y^2 = 96$
$\sqrt{y^2} = \sqrt{96} = \sqrt{16 \cdot 6} = \boxed{4\sqrt{6}}$

(6) $c^2 + a^2 + b^2$
$10^2 = 9^2 + p^2$
$100 = 81 + p^2$
$-81 \quad -81$
$19 = p^2$
$\sqrt{p^2} = \sqrt{19}$
$\boxed{p = \sqrt{19}}$

(7) $c^2 + a^2 + b^2$
$3^2 = 2^2 + q^2$
$9 = 4 + q^2$
$-4 \quad -4$
$5 = q^2$
$\sqrt{q^2} = \sqrt{5}$
$\boxed{q = \sqrt{5}}$

(8) $c^2 + a^2 + b^2$
$12^2 = x^2 + x^2$
$144 = 2x^2$
$\frac{144}{2} = \frac{2x^2}{2}$
$x^2 = 72$
$\sqrt{x^2} = \sqrt{72}$
$\sqrt{72} = \sqrt{36 \cdot 2} = 6\sqrt{2}$

(9) $c^2 + a^2 + b^2$
$y^2 = 5^2 + 9^2$
$y^2 = 25 + 81$
$\sqrt{y^2} = \sqrt{106}$
$y = \sqrt{106} \approx \boxed{10.2}$

(10) $c^2 = a^2 + b^2$

$12^2 = 10^2 + a^2$

$144 = 100 + a^2$

$-100 \quad -100$

$44 = a^2$

$\sqrt{44} = \sqrt{a^2}$

$\sqrt{44} = a$

$\sqrt{4 \cdot 11} = a$

$\boxed{2\sqrt{11} = a}$

(11) $c^2 = a^2 + b^2$

$5^2 = 4^2 + b^2$

$25 = 16 + b^2$

$-16 \quad -16$

$9 = b^2$

$\sqrt{9} = \sqrt{b^2}$

$\boxed{3 = b}$

(12) $c^2 = a^2 + b^2$

$16^2 = x^2 + x^2$

$\frac{256}{2} = \frac{2x^2}{2}$

$x^2 = 128$

$\sqrt{x^2} = \sqrt{128}$

$\sqrt{128} = \sqrt{4 \cdot 4 \cdot 4 \cdot 2} = 2 \cdot 2 \cdot 2\sqrt{2} = 8\sqrt{2} = x.$

2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

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(Choose any three)	☐ 10.G.7	☐ 10.G.8	☐ 10.G.9	☐ 10.G.10	☐ 10.G.11	
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ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 100 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

REVIEW OF THE PYTHAGOREAN THEOREM

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

IDENTIFY THE HYPOTENUSE & LEGS OF GIVEN RIGHT TRIANGLES; DETERMINE IF GIVEN DIMENSIONS REPRESENT A RIGHT TRIANGLE

Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

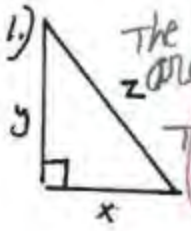
Right Triangle and Pythagorean Theorem

Name: Student Name

Date: 5/24/2011

10.6.5

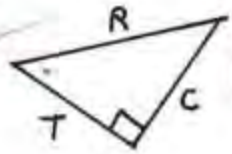
Name the legs and hypotenuse of the right triangle.

1.) 

The hypotenuse are Z. The Legs are X, Y.

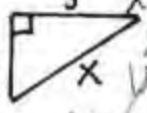
2.) 

The hypotenuse are P. The Legs are MN

3.) 

The hypotenuse are R. The legs are TC.

Find the missing Length.

4.) 

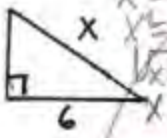
$C^2 = a^2 + b^2$

$X^2 = 2^2 + 3^2$

$X^2 = 4 + 9$

$\sqrt{X^2} = \sqrt{13}$

$X = \sqrt{13} \approx 3.6$

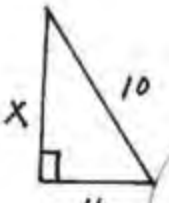
5.) 

$X^2 = 5^2 + 6^2$

$X^2 = 25 + 36$

$\sqrt{X^2} = \sqrt{61}$

$X = \sqrt{61} \approx 7.8$

6) 

$10^2 = x^2 + 4^2$

$100 = x^2 + 16$

$-16 \quad -16$

$84 = x^2$

$\sqrt{84} = \sqrt{x^2}$

$\sqrt{84} \approx 9.1 = x$

Determine if the given lengths are sides of a right triangle.

7.) 2, 2, 4

$C^2 = a^2 + b^2$

$4^2 = 2^2 + 2^2$

$16 = 4 + 4$

$16 = 8$

NOT a Right Triangle

8) 6, 9, 12

$C^2 = a^2 + b^2$

$12^2 = 6^2 + 9^2$

$144 = 36 + 81$

$144 = 117$

Not a Right Triangle

9) 10, 15, 20

$C^2 = a^2 + b^2$

$20^2 = 10^2 + 15^2$

$400 = 100 + 225$

$400 = 325$

NOT a Right Triang

10) 30, 40, 50

$C^2 = a^2 + b^2$

$50^2 = 30^2 + 40^2$

$2{,}500 = 900 + 1{,}600$

$2{,}500 = 2{,}500$

yes is a Right Triangle

Student comments Very Easy.

2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

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How much was done independently by the student? **(Level of Independence =** 95 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

A BRIEF REVIEW THAT IN ANY TRIANGLE $m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ$

A CALCULATOR

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

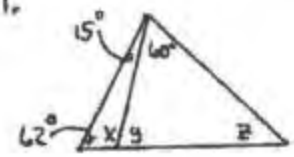
FIND THE MISSING ANGLE MEASURES IN VARIOUS TRIANGLES

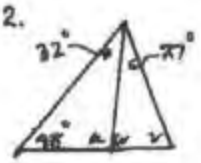
Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

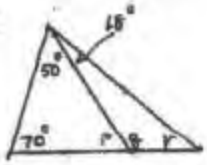
Student's Name Student Name Date 5/25/2011

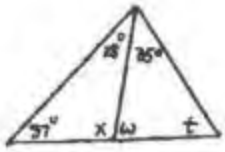
Learning Standard: 10.G.5

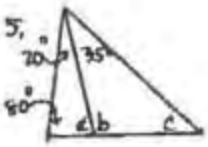
Find the values of the missing angles.

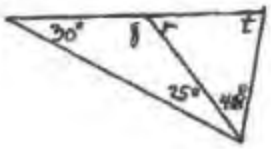
1. 

2. 

3. 

4. 

5. 

6. 

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(1) $62+15+x=180°$
$77+x=180$
$-77 \quad -77$
$x=103$

$y=180-x$
$y=180-103$
$y=77$

$z+60+77=180$
$z+137=180$
$-137 \quad -137$
$z=43$

(2) $48+32+a=180°$
$80+a=180$
$-80 \quad -80$
$100=a$

$w=180-a$
$w=180-100$
$w=80$

$v+w+27=180$
$v+80+27=180$
$v+107=180$
$-107 \quad -107$
$v=73$

(3) $70+50+p=180°$
$120+p=180$
$-120 \quad -120$
$p=60$

$q+p=180$
$q+60=180$
$-60 \quad -60$
$q=120$

$r+q+180=180$
$r+120+18=180$
$r+138=180$
$-138 \quad -138$
$r=42$

(4) $57+28+x=180°$
$85+x=180$
$-85 \quad -85$
$x=95$

$w=180-x$
$w=180-95$
$w=85$

$e+w+35=180$
$e+85+35=180$
$e+120=180$
$-120 \quad -120$
$e=60$

STUDENT COMMENT It is Easy.

⑤ $80+20+a=180°$

$100+a=180$

$-100 \quad -100$

$a=80$

$A+B=180°$

$80+B=180$

$-80 \quad -80$

$B=100$

$C+100+35=180°$

$C+135=180°$

$-135 \quad -135$

$C=45$

⑥ $25+30+g=180°$

$55+g=180$

$-55 \quad -55$

$g=125$

$g+Y=180°$

$125+Y=180$

$-125 \quad -125$

$Y=55$

$t+55+48=180$

$t+103=180$

$-103 \quad -103$

$t=77$

2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

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What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

CALCULATOR AND MCAS REFERENCE SHEET

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

CALCULATE THE MISSING DIMENSIONS FOR 45^0-45^0-90^0 AND 30^0-60^0-90^0 TRIANGLES

Self-evaluation (optional) - continue on back, if needed:

10.6.6

Name: Student Name

Date: 5/25/2011

Special Triangles

30°, 60°, 90°

45°, 45°, 90°

Find The Missing Sides

① 

$\overline{BA} = 2y = 2(4) = 8$ ②

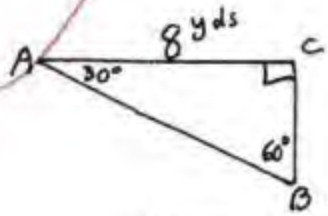
$\overline{CA} = y\sqrt{3} = 4\sqrt{3}$

$\overline{CB} = y = 2.5$

$\overline{CA} = y\sqrt{3} = 2.5\sqrt{3}$

$\frac{2y}{2} = \frac{5}{2}$

$y = 2.5$

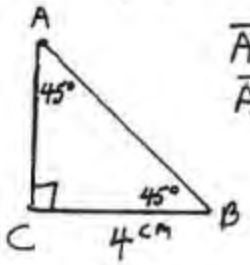
③ 

$\overline{BC} = \frac{8}{3}\sqrt{3}$

$\overline{AB} = \frac{16}{3}\sqrt{3}$

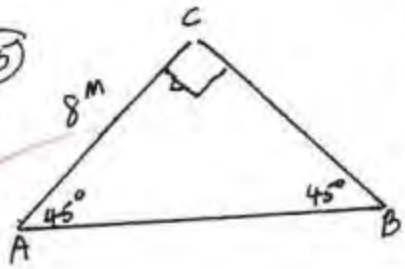
$\frac{y\sqrt{3}}{\sqrt{3}} = \frac{8}{\sqrt{3}} = \frac{8\sqrt{3}}{\sqrt{3}\sqrt{3}} = \frac{8\sqrt{3}}{3} = \frac{8}{3}\sqrt{3} = y$

$AB = 2y = 2\left(\frac{8}{3}\sqrt{3}\right) = \frac{16}{3}\sqrt{3}$

④ 

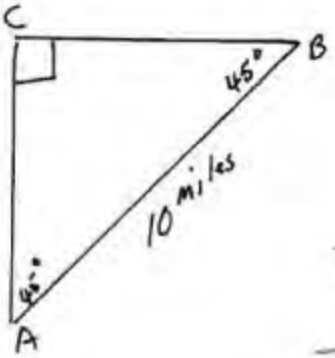
$\overline{AC} = x = 4 = AC$

$\overline{AB} = x\sqrt{2} = 4\sqrt{2} = AB$

⑤ 

$\overline{CB} = x = 8 = CB$

$\overline{AB} = x\sqrt{2} = AB = 8\sqrt{2}$

⑥ 

$\overline{AC} = 5\sqrt{2}$

$\overline{BC} = 5\sqrt{2}$

$\frac{10}{\sqrt{2}} = x\frac{\sqrt{2}}{\sqrt{2}}$

$\frac{10}{\sqrt{2}} = x$

$\frac{10\sqrt{2}}{\sqrt{2}\cdot\sqrt{2}} = x$

$\frac{10\sqrt{2}}{2} = \boxed{5\sqrt{2}}$

Student Comments: 6th problem is difficult.

2011 MCAS Portfolio Appeal

WORK DESCRIPTION for High School Competency Portfolio in MATHEMATICS

(Attach one WORK DESCRIPTION to each piece in the portfolio.)

Student's Name: Student Name **Date work was produced:** 5-25-11

The Mathematics competency portfolio must include:

- Work samples with a minimum of four examples or problems solved by the student for each learning standard listed below.
- Evidence of the student's own thinking and problem solving. Show all work.
- A score (% accurate) for each piece of student work.
- Work produced as independently as possible by the student, with all corrections clearly marked, and a description of the assistance given to the student. The Level of Independence must be indicated below. Work may not be corrected by the teacher and submitted as the student's own work.

Please indicate the strand and learning standard documented in the attached work sample:

☐	**Number Sense and Operations**	☐ 10.N.1	☐ 10.N.2			
☐	**Patterns, Relations, and Algebra**	☐ 10.P.2	☐ 10.P.4	☐ 10.P.5	☐ 10.P.7	
☑	**Geometry** (Choose any three)	☐ 10.G.1	☐ 10.G.2	☐ 10.G.3	☐ 10.G.4	☐ 10.G.5	☑ 10.G.6
		☐ 10.G.7	☐ 10.G.8	☐ 10.G.9	☐ 10.G.10	☐ 10.G.11	
☐	**Measurement**	☐ 10.M.1	☐ 10.M.2	☐ 10.M.3		
☐	**Data Analysis, Statistics, and Probability**		☐ 10.D.1	☐ 10.D.2		

ON THE ATTACHED PIECE:

What score did the student receive? **(Level of Accuracy =** 100 **%)**

How much was done independently by the student? **(Level of Independence =** 100 **%)**

What type and how much assistance, coaching, and prompting did the student receive on the attached piece?

CALCULATOR & MCAS REFERENCE SHEET

What was the student asked to do in order to complete the attached piece (i.e., what was the assignment)?

FINDING THE MISSING SIDES OF 45°-45°-90° AND 30°-60°-90° TRIANGLES USING RELATIONSHIPS SHOWN ON MCAS REFERENCE SHEET

Self-evaluation (optional) - continue on back, if needed: ON EVIDENCE

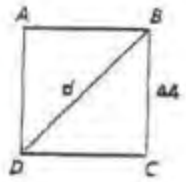
Example Exercises Student Name 5/25/2011

10.G.6

Example 1

ABCD is a square. Find *d* to the nearest:

1. whole number
2. tenth
3. hundredth



$d = x\sqrt{2} = 44\sqrt{2}$

$d \approx 62.225$

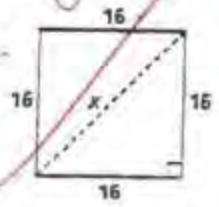
① $d = 62$

② $d = 62.2$

③ $d = 62.23$

Find the value of x to the nearest tenth.

4.



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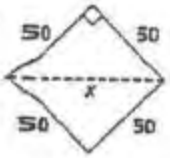

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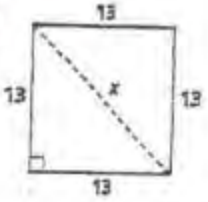
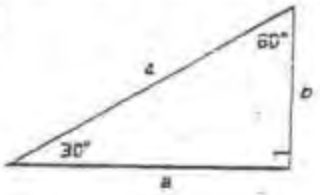


Example 2

Find the value of each variable. Leave your answer in simplest radical form.

7.



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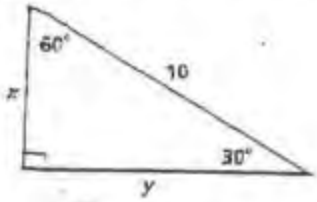

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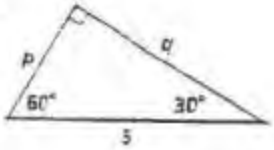
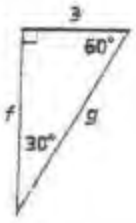


10.



STUDENT COMMENT It is easy to do with Reference sheet.

Student Name 5-25-11

4) $y = x\sqrt{2} = 16\sqrt{2}$
$y = 22.62$
$\boxed{y = 22.6}$

5) $y = x\sqrt{2} = 50\sqrt{2}$
$y = 70.71$
$\boxed{y = 70.7}$

6) $y = x\sqrt{2} = 13\sqrt{2}$
$y = 18.38$
$\boxed{y = 18.4}$

7) $\frac{2y}{2} = \frac{4}{2}$
$y = 2$

8) $y = 2$
$x = y\sqrt{3} = \boxed{2\sqrt{3}}$

9) $\frac{2y}{5} = \frac{5}{5}$
$y = 2.5$
$p = y = 2.5$
$g = y\sqrt{3} = \boxed{2.5\sqrt{3}}$

10) $y = 3$
$g = 2y = 2(3) = 6$
$F = y\sqrt{3} = \boxed{3\sqrt{3}}$

3) $\frac{2y}{2} = \frac{10}{2}$
$y = 5$
$e = y = 5$
$w = e\sqrt{3}$
$\boxed{w = 5\sqrt{3}}$