

Name:

Key

Date:

Block:

Geometry – Chapter 5 Review

Use your notes to help you if you get stuck on any sections.

5.4 – Triangle Midsegments

6. Find each measure.

a. BC

35.1

b. XZ

64.8

c. XC

32.4

d. $m\angle BCZ$

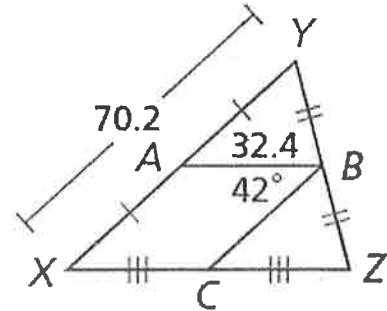
42°

e. $m\angle BAX$

138°

f. $m\angle YXZ$

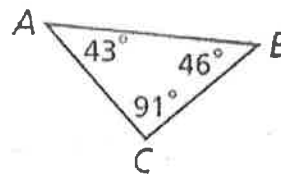
42°



5.5 - Inequalities in Triangles

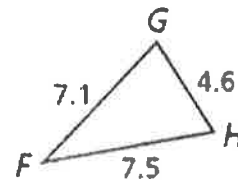
7. List the sides in order from shortest to longest.

\overline{BC} , \overline{AC} , \overline{AB}



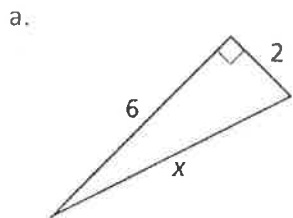
8. List the angles in order from smallest to largest.

$\angle F$, $\angle H$, $\angle G$



5.7 – Pythagorean Theorem

10. Find the value of x. Give your answer in simplest radical form.

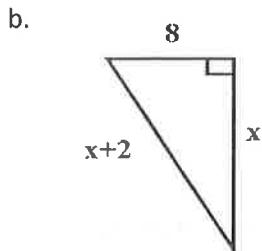


$$2^2 + 6^2 = x^2$$

$$4 + 36 = x^2$$

$$\sqrt{40} = \sqrt{x^2}$$

$$X = 2\sqrt{10}$$

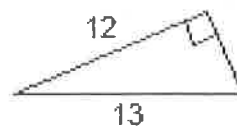


$$8^2 + x^2 = (x+2)^2$$

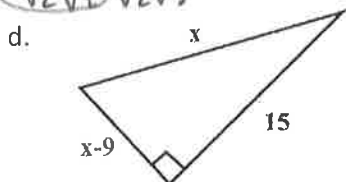
$$64 + x^2 = x^2 + 4x + 4$$

$$\frac{60}{4} = \frac{4x}{4}$$

$$15 = x$$



Pythagorean Triplet!
 $X = 5$



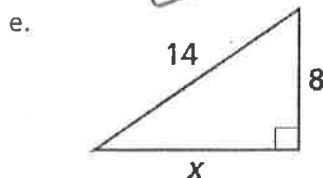
$$(x-9)^2 + 15^2 = x^2$$

$$x^2 - 18x + 81 + 225 = x^2$$

$$-18x + 306 = 0$$

$$\frac{-18x}{-18} = \frac{-306}{-18}$$

$$X = 17$$

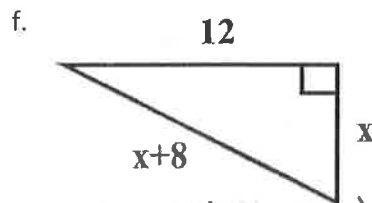


$$x^2 + 8^2 = 14^2$$

$$x^2 + 64 = 196$$

$$\sqrt{x^2} = \sqrt{132}$$

$$X = \sqrt{115}$$



$$x^2 + 12^2 = (x+8)^2$$

$$x^2 + 144 = x^2 + 16x + 64$$

$$\frac{80}{16} = \frac{16x}{16}$$

$$5 = x$$

11. Tell if the measures can be the side lengths of a triangle. If so, classify the triangle as acute, obtuse, or right.

$$c^2 ? a^2 + b^2$$

a. 9, 12, 16 \triangle ✓

$$16^2 ? 9^2 + 12^2$$

$$256 \quad 81 + 144$$

$$256 > 225$$

obtuse

c. 7, 9, 11 \triangle ✓

$$11^2 ? 7^2 + 9^2$$

$$121 ? 49 + 81$$

$$121 < 130$$

Acute \triangle

b. 11, 14, 27

Not a \triangle

d. 8, 15, 17 \triangle ✓

$$17^2 ? 8^2 + 15^2$$

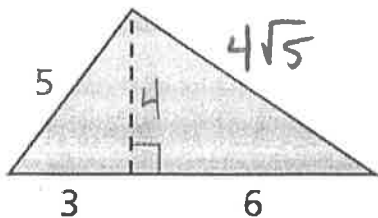
$$289 ? 64 + 225$$

$$289 = 289$$

Right \triangle

12. Find the area and perimeter of each triangle.

a.



$$4^2 + 6^2 = c^2$$

$$16 + 36 = c^2$$

$$\sqrt{52} = \sqrt{c^2}$$

$$\sqrt{4} \sqrt{13}$$

$$2\sqrt{13}$$

$$2\sqrt{13} = c$$

$$A_{\Delta} = \frac{1}{2}bh$$

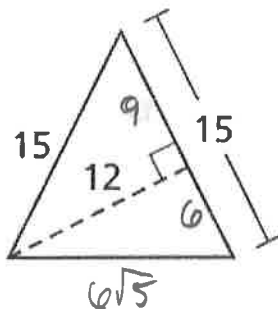
$$A = \frac{1}{2}(9)(4)$$

$$A_{\Delta} = 18 \text{ units}^2$$

$$P = 5 + 9 + 2\sqrt{13}$$

$$P = 14 + 2\sqrt{13} \text{ units}$$

b.



$$6^2 + 12^2 = c^2$$

$$36 + 144 = c^2$$

$$\sqrt{180} = \sqrt{c^2}$$

$$\sqrt{2} \sqrt{90} =$$

$$\sqrt{2} \sqrt{9 \cdot 10}$$

$$3\sqrt{20}$$

$$3\sqrt{4 \cdot 5}$$

$$2 \cdot 3\sqrt{5} = c$$

$$6\sqrt{5} = c$$

$$A_{\Delta} = \frac{1}{2}bh$$

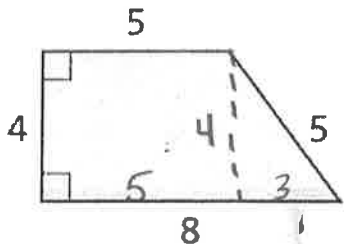
$$A_{\Delta} = \frac{1}{2}(15)(12)$$

$$A_{\Delta} = 90 \text{ units}^2$$

$$P = 15 + 15 + 6\sqrt{5}$$

$$P = 30 + 6\sqrt{5} \text{ units}$$

c.



$$A_{\text{RECT}} = b \cdot h$$

$$= 5 \cdot 4$$

$$= 20$$

$$A_{\Delta} = \frac{1}{2}bh$$

$$= \frac{1}{2}(3)(4)$$

$$= 6$$

$$A_{\text{TOTAL}} = 20 + 6 = 26 \text{ units}^2$$

$$P = 4 + 8 + 5 + 5 = 22 \text{ units}$$

