

Unit 5 Review Key

Similar Polygons

- 1.) One is a dilation of the other.
- 2.) $x = 9.71$
- 3.) No (ALL matching sides have same ratio
NOT ALL matching angles are congruent)
- 4.) $w = 62$
 $x = 7.5$
 $y = 10.5$
 $z = 12$
- 5.) $\triangle ABD \sim \triangle BCD \sim \triangle ACB$
(Because of AA)

Dilations

- 2.) Matching sides have the same ratio
Matching angles are congruent
- 3.) $Q'(-1.5, 4.5)$
 $U'(6, 10.5)$
 $A'(7.5, 12)$
 $D'(3, 7.5)$
- 4.) Scale Factor = $-1/2$
- 5/6.) Be able to do problems with constructions.

Trig Lengths

- 2.) $x = 8.24$; $y = 20.40$
- 3.) $w = 10.76$
- 4.) $x = 10$; $a = 0.972$; $b = 5.09$
- 5.) $A = 26.49$; $B = 20.69$
- 6.) $x = 68.24$

Special Right Triangles

- 1.) $x = y = 5\sqrt{2}$
- 2.) $x = 5\sqrt{33}$; $y = 10\sqrt{33}$
- 3.) $x = 18\sqrt{30}$; $Y = 54\sqrt{10}$; $Z = 36\sqrt{30}$
- 4.) $90\sqrt{2}$
- 5.) $X = 33$; $Y = 2\sqrt{399}$
- 6.) $A = 10\sqrt{13}$ $B = \frac{20\sqrt{39}}{3}$ $C = \frac{10\sqrt{39}}{3}$ $D = \frac{10\sqrt{78}}{3}$ $E = \frac{20\sqrt{13}}{3}$ $F = \frac{40\sqrt{13}}{3}$

Trig Apps

- 3.) 129.57 meters
- 4.) 69.9 feet
- 5.) 84.99 degrees
- 10.) 363.39

Similar Triangles

- 2.) DF / EF
- 3.) $m = 28$
- 4.) No
- 5.) $s = 42$; $n = 54$
 \sim by AAA
- 6.) $r = 28$; $s = 120$

Side-Splitting

- 2.) $x = 3.2$; $y = 2.67$
- 3.) $x = 11.2$; $y = 1.43$
 $w = 6.15$; $z = 11.10$
- 4.) $m \parallel p$
- 5.) $x = 30$; $y = 6$
- 6.) $x = 6.5$; $y = -0.4$

Trig Angles

- 4.) 13.61, 76.39
- 5.) 16.26, 73.74
- 6.) 41.81
- 8.) 22.25
- 10.) 76.69

Final

$$A = \frac{\sqrt{498}}{3} \quad B = \sqrt{166} \quad C = \frac{2\sqrt{498}}{3} \quad D = \frac{2\sqrt{498}}{3} \quad E = \frac{4\sqrt{249}}{3} \quad F = \sqrt{166} \quad G = \frac{\sqrt{498}}{3}$$