

Angles in Quadrilaterals

ACMMG202 – Measurement and Geometry (Answers)

Name: _____

Score: _____

Teacher: _____



Assessment



Navigator



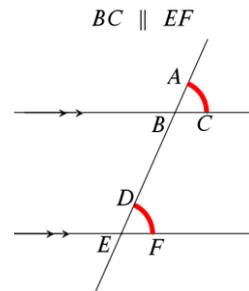
Student



30 min

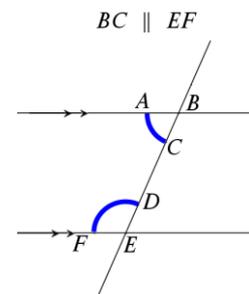
Q.1. $\angle ABC$ and $\angle DEF$ are called:

- a) alternate
- b) corresponding**
- c) allied
- d) co-interior
- e) vertically opposite



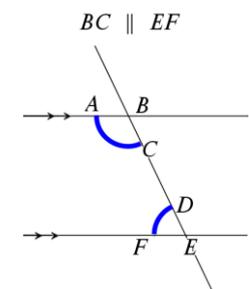
Q.2. $\angle ABC$ and $\angle DEF$ are called:

- a) alternate
- b) corresponding
- c) allied**
- d) congruent
- e) vertically opposite



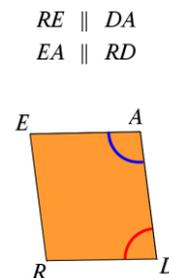
Q.3. If $\angle ABC = 125^\circ$ then $\angle DEF$ is equal to:

- a) 25°
- b) 35°
- c) 55°**
- d) 65°
- e) 125°



Q.4. If $\angle ADR = 80^\circ$ then $\angle DAE$ is equal to:

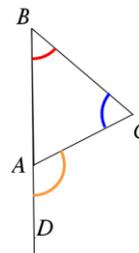
- a) 120°
- b) 100°**
- c) 80°
- d) 20°
- e) 10°



Q.5. Given the information provided opposite; $\angle CAD$ is equal to:

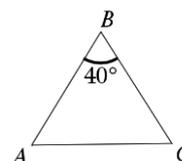
- a) 140°
- b) 130°
- c) 120°
- d) 65°
- e) 50°

$$\triangle ABC + \triangle ACB = 130^\circ$$



Q.6. $\triangle ABC$ is an isosceles triangle. $\angle BAC$ is equal to:

$$(180^\circ - 40^\circ)/2 = 70^\circ$$

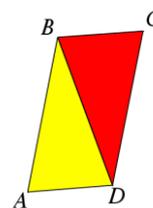


Q.7. $\triangle ABC$ is isosceles and congruent with $\triangle BCD$ Given $AB=BD$, it follows ABCD must be a:

- a) square
- b) rectangle
- c) rhombus
- d) Parallelogram
- e) trapezium

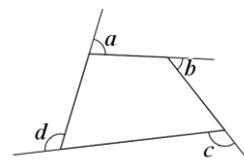
$$\triangle ABC \cong \triangle BCD$$

$$AB=BD$$



Q.8. The angle sum: $a + b + c + d$ is equal to:

$$360^\circ$$

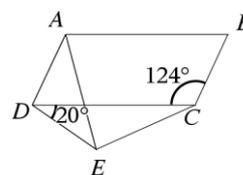


Q.9. ABCD is a parallelogram and $AD=DE$, therefore $\angle DAE$ is equal to:

$$\angle CBA = 56^\circ \text{ [Allied or Co-interior angles]}$$

$$\angle CBA = \angle CDA \text{ [Parallelogram]}$$

$$\angle DAE = (180 - (20^\circ + 56^\circ))/2 = 52 \text{ [Isosceles AD=DE]}$$



Q.10. Determine the size of $\angle DAE$:

$$\angle AEB = 70^\circ \text{ } [\angle AEB + \angle AED = 180^\circ]$$

$$\angle EBA = 180 - 2 \times 70^\circ = 40^\circ \text{ } [\triangle ABE \text{ Isosceles}]$$

$$\angle ADB = 40^\circ \text{ } [\triangle ABD \text{ Isosceles}]$$

$$\angle DAE = 180 - 40^\circ - 110^\circ = 30^\circ \text{ } [\triangle ADE]$$

ABCD is a rhombus

$$\triangle DEA = 110^\circ$$

$$AB=EB$$

