ALBERTA MATH 20-2 · UNIT 3 · 25 QUESTIONS

Angles and Triangles — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Two angles are complementary. One angle measures 34°. The measure of the other angle is**

- A 66°
- B 34°
- C 146°
- D 56°

Understand It with Pulse | Flag a mistake

2 **Two straight lines intersect. One of the angles formed measures 65°. The measure of the angle vertically opposite it is**

- A 115°
- B 65°
- C 25°
- D 295°

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3 **Two angles form a linear pair. One angle measures 121°. The measure of the second angle, in degrees, is ____. Record your answer as a whole number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Triangle ABC is shown. AB = 5 cm, BC = 12 cm. The length of AC is**

A 13 cm

B 17 cm

C 10 cm

D 7 cm

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5 **Lines l and m are parallel. A transversal cuts both lines, forming an angle of 108°. The measure of the angle in the corresponding position at the other line is**

- A 108°
- B 72°
- C 82°
- D 62°

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6 **Two parallel lines are cut by a transversal. One interior angle measures (2x + 14)°, and its alternate interior angle measures 78°. The value of x is**

- A 23
- B 46
- C 64
- D 32

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7 **A transversal cuts two parallel lines. A same-side interior angle measures 96°. The measure of the other same-side interior angle, in degrees, is ____. Record your answer as a whole number.**

ANSWER _____

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8 **In a triangle, two interior angles measure 44° and 58°. The measure of the exterior angle at the third vertex is**

A 78°

B 102°

C 92°

D 112°

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9 **Triangle ABC is shown. AB = 8 cm, AC = 6 cm. The length of BC is**

- A 14 cm
- B 10 cm
- C 12 cm
- D 9 cm

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10 **Triangle ABC is shown. AB = 9 cm, AC = 12 cm. The length of BC is**

- A 21 cm
- B 13 cm
- C 15 cm
- D 18 cm

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11 **A ray bisects an angle, splitting it into two angles measuring (5x - 6)° and (3x + 14)°. The value of x is**

- A 10
- B 4
- C 8
- D 20

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12 **Two parallel lines are cut by a transversal. The two same-side interior angles measure (4x + 10)° and (5x + 26)°. The value of x is ____. Record your answer as a whole number.**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **Two similar triangles have a similarity ratio (smaller to larger) of 2 : 5. The perimeter of the smaller triangle is 18 cm. The perimeter of the larger triangle is**

- A 36 cm
- B 40 cm
- C 50 cm
- D 45 cm

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14 **Two triangles each have sides of 7 cm and 10 cm, with an included angle of 42°. The condition that proves the two triangles congruent is**

- A SSS
- B ASA
- C SAS
- D AAS

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15 **A person who is 1.6 m tall casts a shadow 2.0 m long. At the same time, a tree casts a shadow 13 m long. The height of the tree, in metres, is ____. Record your answer to the nearest tenth.**

ANSWER _____

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16 **An exterior angle of a triangle measures 130°. The two non-adjacent interior angles measure x° and (x + 30)°. The value of x is**

A 50

B 40

C 60

D 65

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17 **Which of the following is NOT a valid condition for proving two triangles congruent?**

A SSS

B ASA

C AAS

D SSA

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18 **Lines a and b are parallel. Angle 1 measures 133°, angle 2 is in the corresponding position to angle 1, and angle 3 is a same-side interior angle with angle 2. The measure of angle 3 is**

A 133°

B 47°

C 57°

D 43°

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19 **Triangle ABC is shown. Angle B measures 47°. The measure of angle C is**

A 133°

B 43°

C 47°

D 90°

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20 **In an isosceles triangle, each base angle measures (2x + 25)° and the vertex angle measures (3x - 10)°. The measure of the vertex angle is**

A 20°

B 45°

C 65°

D 50°

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21 **The three angles of a triangle are in the ratio 1 : 3 : 5. The measure of the largest angle, in degrees, is ____. Record your answer as a whole number.**

ANSWER _____

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22 **Triangle ABC is congruent to triangle DEF. Angle A measures 59° and side AB measures 11 cm. Which statement must be true?**

A Angle E measures 59°

B Side DE measures 11 cm

C Side BC is equal to side DF

D Angle C is equal to angle D

Understand It with Pulse | Flag a mistake

23 **Triangle ABC is shown. Angle B measures 35°. The measure of angle C is**

- A 125°
- B 55°
- C 35°
- D 90°

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24 **An exterior angle of a triangle measures (4x)°. The two non-adjacent interior angles measure 35° and (2x + 5)°. The value of x is ____. Record your answer as a whole number.**

ANSWER _____

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25 **Two parallel lines are cut by a transversal. At the top intersection, the interior angle on the right side measures 64°. At the bottom intersection, angle X is the interior angle on the left side, and angle Y forms a linear pair with angle X. The measure of angle Y is**

A 116°

B 64°

C 26°

D 126°

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ANSWER KEY

1. D
2. B
3. 59
4. A
5. A
6. D
7. 84
8. B
9. B
10. C
11. A
12. 16
13. D
14. C
15. 10.4
16. A
17. D
18. B
19. B
20. D
21. 100
22. B
23. B
24. 20
25. A

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