Read and use angle facts

Check Your Skill Level | 48 canonical questions | Stages 01-06

Stage 01: Name and recognise angles

Recognise

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. In ∠PQR, which letter names the vertex?

2. In ∠LMN, which letter names the vertex?

3. In ∠XYZ, which letter names the vertex?

4. In ∠DEF, which letter names the vertex?

5. In ∠RST, which letter names the vertex?

6. In ∠ABC, which letter names the vertex?

7. Diagnose an error. In ∠PQR, which letter names the vertex? A learner answers “First letter”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. In ∠LMN, which letter names the vertex?

Self-check after attempting: use the separate answer key on the skill page. Correct reasoning and a valid drawing matter as well as the final answer.

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Stage 02: Interpret the given relation

Interpret

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. An angle of 72.5° and angle b form a straight line. Which equation represents the condition?

2. An angle of 110° and angle b form a straight line. Which equation represents the condition?

3. An angle of 125° and angle b form a straight line. Which equation represents the condition?

4. An angle of 137.5° and angle b form a straight line. Which equation represents the condition?

5. In ∠ABC, which letter names the vertex?

6. In ∠PQR, which letter names the vertex?

7. Diagnose an error. An angle of 72.5° and angle b form a straight line. Which equation represents the condition? A learner answers “b = 180”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. An angle of 110° and angle b form a straight line. Which equation represents the condition?

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Stage 03: Calculate one unknown

Perform

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. Two lines intersect. One angle is 110°. Find its vertically opposite angle.

2. Two lines intersect. One angle is 125°. Find its vertically opposite angle.

3. Two lines intersect. One angle is 137.5°. Find its vertically opposite angle.

4. Two lines intersect. One angle is 40°. Find its vertically opposite angle.

5. An angle of 65° and angle b form a straight line. Which equation represents the condition?

6. An angle of 72.5° and angle b form a straight line. Which equation represents the condition?

7. Diagnose an error. Two lines intersect. One angle is 110°. Find its vertically opposite angle. A learner answers “111”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. Two lines intersect. One angle is 125°. Find its vertically opposite angle.

Self-check after attempting: use the separate answer key on the skill page. Correct reasoning and a valid drawing matter as well as the final answer.

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Stage 04: Select a valid fact

Select & Adapt

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. Two adjacent angles form a straight line. One is 125°. Find the other.

2. Two adjacent angles form a straight line. One is 137.5°. Find the other.

3. Two adjacent angles form a straight line. One is 40°. Find the other.

4. Two adjacent angles form a straight line. One is 65°. Find the other.

5. Two lines intersect. One angle is 72.5°. Find its vertically opposite angle.

6. Two lines intersect. One angle is 110°. Find its vertically opposite angle.

7. Diagnose an error. Two adjacent angles form a straight line. One is 125°. Find the other. A learner answers “56”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. Two adjacent angles form a straight line. One is 137.5°. Find the other.

Self-check after attempting: use the separate answer key on the skill page. Correct reasoning and a valid drawing matter as well as the final answer.

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Stage 05: Combine angle facts

Connect & Justify

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. At one point, three angles are 137.5°, 90° and b. Find b if these fill one full turn.

2. At one point, three angles are 40°, 90° and b. Find b if these fill one full turn.

3. At one point, three angles are 65°, 90° and b. Find b if these fill one full turn.

4. At one point, three angles are 72.5°, 90° and b. Find b if these fill one full turn.

5. Two adjacent angles form a straight line. One is 110°. Find the other.

6. Two adjacent angles form a straight line. One is 125°. Find the other.

7. Diagnose an error. At one point, three angles are 137.5°, 90° and b. Find b if these fill one full turn. A learner answers “133.5”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. At one point, three angles are 40°, 90° and b. Find b if these fill one full turn.

Self-check after attempting: use the separate answer key on the skill page. Correct reasoning and a valid drawing matter as well as the final answer.

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Stage 06: Solve a turning context

Transfer & Solve

Show your working or construction on paper. State units where asked. For questions 7 and 8, explain your method. Numerical entries may be rounded to 2 decimal places.

Work on separate paper. Plot and label figures; retain compass arcs. Give a reason for items 7 and 8.

1. A robot turns 40° anticlockwise then continues in the same direction to complete a full turn. How much farther must it turn?

2. A robot turns 65° anticlockwise then continues in the same direction to complete a full turn. How much farther must it turn?

3. A robot turns 72.5° anticlockwise then continues in the same direction to complete a full turn. How much farther must it turn?

4. A robot turns 110° anticlockwise then continues in the same direction to complete a full turn. How much farther must it turn?

5. At one point, three angles are 125°, 90° and b. Find b if these fill one full turn.

6. At one point, three angles are 137.5°, 90° and b. Find b if these fill one full turn.

7. Diagnose an error. A robot turns 40° anticlockwise then continues in the same direction to complete a full turn. How much farther must it turn? A learner answers “321”. Give the correct answer and identify why the proposed answer fails.

8. Explain your choice. A robot turns 65° anticlockwise then continues in the same direction to complete a full turn. How much farther must it turn?

Self-check after attempting: use the separate answer key on the skill page. Correct reasoning and a valid drawing matter as well as the final answer.

Mr. Devonish