



## Identifying Triangle Angles and Lengths

Name: \_\_\_\_\_

**Determine if the statement is possible(p) or impossible(i).**

- 1) A triangle with the angles:  $53^\circ$ ,  $90^\circ$  and  $37^\circ$ .
- 2) A triangle with the angles:  $87^\circ$ ,  $16^\circ$  and  $77^\circ$ .
- 3) A triangle with the angles:  $13^\circ$ ,  $31^\circ$  and  $136^\circ$ .
- 4) A triangle with the angles:  $60^\circ$ ,  $7^\circ$  and  $110^\circ$ .
- 5) A triangle with the angles:  $21^\circ$ ,  $12^\circ$  and  $120^\circ$ .
- 6) A triangle with the angles:  $28^\circ$ ,  $20^\circ$  and  $132^\circ$ .
- 7) A triangle with the angles:  $34^\circ$ ,  $113^\circ$  and  $33^\circ$ .
- 8) A triangle with the angles:  $24^\circ$ ,  $29^\circ$  and  $97^\circ$ .
- 9) A triangle with the angles:  $149^\circ$ ,  $4^\circ$  and  $27^\circ$ .
- 10) A triangle with the angles:  $16^\circ$ ,  $25^\circ$  and  $114^\circ$ .
- 11) A triangle with the sides: 4mm, 4mm and 4mm.
- 12) A triangle with the sides: 10in, 10in and 10in.
- 13) A triangle with the sides: 8in, 5in and 4in.
- 14) A triangle with the sides: 7mm, 7mm and 3mm.
- 15) A triangle with the sides: 10ft, 2ft and 1ft.
- 16) A triangle with the sides: 9ft, 4ft and 10ft.
- 17) A triangle with the sides: 3mm, 3mm and 3mm.
- 18) A triangle with the sides: 4ft, 8ft and 9ft.
- 19) A triangle with the sides: 7ft, 2ft and 1ft.
- 20) A triangle with the sides: 9cm, 9cm and 10cm.

**Answers**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
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10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
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16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_



# Identifying Triangle Angles and Lengths

Name: **Answer Key**

Determine if the statement is possible(p) or impossible(i).

- 1) A triangle with the angles:  $53^\circ$ ,  $90^\circ$  and  $37^\circ$ .
- 2) A triangle with the angles:  $87^\circ$ ,  $16^\circ$  and  $77^\circ$ .
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- 4) A triangle with the angles:  $60^\circ$ ,  $7^\circ$  and  $110^\circ$ .
- 5) A triangle with the angles:  $21^\circ$ ,  $12^\circ$  and  $120^\circ$ .
- 6) A triangle with the angles:  $28^\circ$ ,  $20^\circ$  and  $132^\circ$ .
- 7) A triangle with the angles:  $34^\circ$ ,  $113^\circ$  and  $33^\circ$ .
- 8) A triangle with the angles:  $24^\circ$ ,  $29^\circ$  and  $97^\circ$ .
- 9) A triangle with the angles:  $149^\circ$ ,  $4^\circ$  and  $27^\circ$ .
- 10) A triangle with the angles:  $16^\circ$ ,  $25^\circ$  and  $114^\circ$ .
- 11) A triangle with the sides: 4mm, 4mm and 4mm.
- 12) A triangle with the sides: 10in, 10in and 10in.
- 13) A triangle with the sides: 8in, 5in and 4in.
- 14) A triangle with the sides: 7mm, 7mm and 3mm.
- 15) A triangle with the sides: 10ft, 2ft and 1ft.
- 16) A triangle with the sides: 9ft, 4ft and 10ft.
- 17) A triangle with the sides: 3mm, 3mm and 3mm.
- 18) A triangle with the sides: 4ft, 8ft and 9ft.
- 19) A triangle with the sides: 7ft, 2ft and 1ft.
- 20) A triangle with the sides: 9cm, 9cm and 10cm.

## Answers

1. **p**
2. **p**
3. **p**
4. **i**
5. **i**
6. **p**
7. **p**
8. **i**
9. **p**
10. **i**
11. **p**
12. **p**
13. **p**
14. **p**
15. **i**
16. **p**
17. **p**
18. **p**
19. **i**
20. **p**