

# Page 1

①  $x = 8.5$

②  $\angle M = 122^\circ$

③  $x = 49^\circ$   
 $y = 131^\circ$

④  $\angle F = 51^\circ$   
 $\angle G = 39^\circ$

⑤  $m\angle 2 = 105^\circ$

⑥  $\angle 1 = 36^\circ$   
 $\angle 2 = 54^\circ$   
 $\angle 3 = 90^\circ$   
 $\angle 4 = 54^\circ$

# Page 2

①  $118^\circ$   
 $28^\circ$

②  $8n - 4 = 10^\circ$   
 $15n + 50 = 80^\circ$

③  $x = 8$   
 $\angle A = 112^\circ$

④  $5x - 18 = 34.5^\circ$   
 $15x - 12 = 145.5^\circ$

⑤ complementary =  $90^\circ$   
supplementary =  $180^\circ$

⑥  $\angle 1 = 68^\circ$   
 $\angle 2 = 118^\circ$   
 $\angle 3 = 62^\circ$

# Page 3

- 1)  $95^\circ$
- 2)  $85^\circ$
- 3)  $95^\circ$
- 4)  $85^\circ$
- 5)  $95^\circ$
- 6)  $85^\circ$
- 7)  $85^\circ$

- 8)  $60^\circ$
- 9)  $80^\circ$
- 10)  $120^\circ$
- 11)  $40^\circ$
- 12)  $120^\circ$
- 13)  $60^\circ$
- 14)  $100^\circ$
- 15)  $80^\circ$
- 16)  $40^\circ$
- 17)  $100^\circ$

- 18)  $95^\circ$
- 19)  $95^\circ$
- 20)  $90^\circ$
- 21)  $95^\circ$
- 22)  $85^\circ$
- 23)  $95^\circ$
- 24)  $90^\circ$
- 25)  $90^\circ$
- 26)  $90^\circ$
- 27)  $90^\circ$
- 28)  $85^\circ$
- 29)  $90^\circ$
- 30)  $85^\circ$
- 31)  $85^\circ$

# Page 4

- 19)  $x = 4$
- 20)  $x = 7$
- 21)  $x = 8$
- 22)  $x = -7$
- 23)  $x = 9$
- 24)  $x = 5$
- 25)  $90^\circ, 90^\circ$
- 26)  $20x + 15 = 85^\circ$   
 $24x - 1 = 95^\circ$
- 27)  $60^\circ, 60^\circ$
- 28)  $x + 109 = 101^\circ$   
 $x + 89 = 81^\circ$

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①  $\angle M = 71^\circ$

②  $\angle Q = 30^\circ$

③  $x = 12$

$\angle T = 86^\circ$

$\angle U = 29^\circ$

$\angle V = 103^\circ$

④  $n = 90^\circ$

$\angle X = 90^\circ$

$\angle Y = 45^\circ$

$\angle Z = 45^\circ$

⑤  $y = 10$

$\angle C = 40^\circ$

$\angle D = 76^\circ$

$\angle E = 104^\circ$

⑥  $z = 7$

$\angle K = 19^\circ$

$\angle L = 129^\circ$

Page 6

⑦  $x = 20$

$\angle ABC = 140^\circ$

$\angle BCD = 100^\circ$

⑧  $x = 5$

$\angle CAB = 55^\circ$

$\angle ACD = 145^\circ$

⑨  $x = 31$

$\angle ABC = 124^\circ$

$\angle CBD = 56^\circ$

Page 7

1)  $40^\circ$

2)  $50^\circ$

3)  $30^\circ$

4)  $60^\circ$

5)  $40^\circ$

6)  $50^\circ$

7)  $30^\circ$

8)  $40^\circ$

9)  $30^\circ$

10)  $150^\circ$

11)  $30^\circ$

12)  $150^\circ$

13)  $90^\circ$

14)  $90^\circ$

15)  $90^\circ$

16)  $90^\circ$

17)  $50^\circ$

18)  $130^\circ$

19)  $50^\circ$

20)  $130^\circ$

Page 8

1)  $30^\circ$

2)  $30^\circ$

3)  $70^\circ$

4)  $110^\circ$

5)  $110^\circ$

6)  $70^\circ$

7)  $115^\circ$

8)  $115^\circ$

9)  $100^\circ$

10)  $100^\circ$

11)  $45^\circ$

12)  $135^\circ$