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1. 2.4

2. a) Show that it doesn't satisfy Pythagoras.
   b) $4\sqrt{3}$

3. $32\sqrt{3}-12\pi$

4. $\frac{13}{3}$

5. 180
   53.1° _ *and* _126.9°

6. 16

7. 6
   $\angle A = 30^\circ$

8. $\frac{16\pi}{3}$

9. 19.2

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10. 23.49

11. $20\sqrt{3}+\frac{70\pi}{3}$

12. $x = 18-6\sqrt{5}$
    $y = 9-3\sqrt{5}$

13. $\frac{8\sqrt{21}}{5}$

14. 40

15. 4 and 8

16. $AB = 20\sqrt{4\sqrt{2}+5}$
$DC = 10\sqrt{4\sqrt{2}+5}$

17. $\left(75+50\sqrt{2}\right)\pi$

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2. a) 12
b) 13
c) 8
d) 3 or 8
e) 6
f) 3

3. 3 or 18

4. 15

5. 5

6. 2.8

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7. $\frac{20}{3}$

8. x = 2, y = 7

9. 3.84

10. 15 cm

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1. $5\sqrt{2}$

2. 16

3. $6+6\sqrt{3}$

4. $22+4\sqrt{3}+4\sqrt{6}$

5. $21+7\sqrt{3}+7\sqrt{6}$

6. $3+3\sqrt{3}+3\sqrt{6}$

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7. $32+16\sqrt{2}$

8. $63\sqrt{2}$

9. $44\sqrt{3}$

10. $\dfrac{25\sqrt{3}+75}{2}$

11. $8\sqrt{3}-8$

12. $\angle A=30^\circ$

13. $\angle J=120^\circ$

14. $18+18\sqrt{3}$

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15. $\dfrac{40\sqrt{3}}{3}$

16. $6\sqrt{2}$

17. $\dfrac{10\sqrt{3}}{3}$

18. $XY=10\sqrt{3}$
$YZ=10\sqrt{2}$
$XZ=5\sqrt{6}+5\sqrt{2}$

19. $10\sqrt{3}$