5.60 a) Various answers, one might be they are the 3 #5 (tuple) that make a right triangle satisfying the Pythagorean theorem.

b) Possible sets include multiples of

(3, 4, 5), (5, 12, 13), (8, 15, 17),...

(6, 8, 10), (10, 24, 26), (14, 48, 50), (16, 30, 34),...

5.61 a)\[ \triangle \]

b) \[ \triangle \]

c) \[ \triangle \]

5.62 a) \[ \triangle \]

d) \[ \triangle \]

e) \[ \triangle \]
5-63 a) \[ A = 3\sqrt{3} \] b) \[ P = 6\sqrt{2} + 4\sqrt{6} \]

\[ P = 5 + 6 = 11 \text{ units} \]

\[ A = \frac{1}{2} \cdot 6 \cdot 6 = 18 \]

\[ P = 24 + 6\sqrt{2} \approx 32.98 \text{ units} \]

\[ A = \frac{1}{2} \cdot 8 \cdot \sqrt{3} + 8 \cdot \sqrt{3} \]

\[ A = 6 + 24 \]

\[ A = 30 \text{ square units} \]

5-64 a) \( \frac{16}{4}\) units \( \frac{3}{4}/\sqrt{5} \)

b) \( 4 \) yards; \( 4 \sqrt{2} \) yards

c) \( 24 \) feet

5-65 a) Isosceles

b) you may use any 2 \( \angle \)s,

\[ m\angle A = m\angle C \]

\[ m\angle B = m\angle D \]

\[ \triangle ABC \sim \triangle DEC \]

AA~

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5-66 \[ \cos 52^0 = \frac{5}{c} \], \[ \tan 52^0 = \frac{a}{b} \], \[ \cos 360 = \frac{a}{c} \]

5-67 \[ \frac{14}{27} = \frac{x}{40} \]
\[ 27x = 14 \times 40 \]
\[ x = \frac{14 \times 40}{27} = 20.74 \text{ inches} \]

5-70
a) \[ P \text{ (at least one pair of 11 sides)} = \frac{9}{8} = 1 \frac{\text{1}}{8} \]
b) \[ P \text{ (10,10,10)} = \frac{6}{5} = 1 \frac{\text{1}}{5} \]
c) \[ P \text{ (not a D)} = \frac{5}{6} = \frac{5}{6} \]
d) \[ P \text{ (has at least 3 sides)} = \frac{8}{5} = 1 \frac{3}{5} \]

5-68
a) An explicit equation would be more useful:
\[ a_n = -3 + 4n - 1 \]
\[ a_n = 4n - 4 \]
\[ b) a_{50} = 193 \]
\[ c) \]
\[ 3, 2^{3/3}, 2^{1/3}, 2^{1/3}, 2^{1/3}, \ldots \]
\[ a_n = 3^{1/3} (n-1) = 3^{1/3} - 1/3 \]

5-69
\[ \frac{135}{360} \]
\[ 360 - 90 = 270 \]
\[ 270/2 = 135 \]
\[ \sqrt{135} + \sqrt{135} + \sqrt{135} = 270 \]
\[ \frac{135}{360} + \frac{135}{360} + \frac{135}{360} = \frac{360}{360} = 1 \]

Check:\n\[ \frac{135}{360} + \frac{135}{360} + \frac{135}{360} = \frac{360}{360} = 1 \]

See notes following 5-65 to solve this problem!
\[ \#3 \left( \frac{135}{360} \right) + \#5 \left( \frac{135}{360} \right) + \left( -\frac{45}{360} \right) \left( \frac{540}{360} \right) = 81, 50 \]
\[ = \frac{405}{360} + \frac{675}{360} - \frac{540}{360} = \frac{540}{360} = 1.5 \]

What is not a fair game because the expected value is not zero.