10-5 Standardized Test Prep
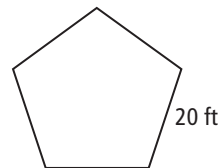
Trigonometry and Area

Multiple Choice

For Exercises 1–6, choose the correct letter.
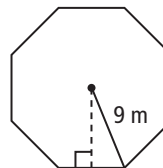
1. What is the area of the regular pentagon at the right?

(A) 688.2 ft^2 (C) 951.1 ft^2

(B) 850.7 ft^2 (D) 1376.4 ft^2

20 ft

2. What is the area of the regular octagon at the right?

(F) 114.5 m^2 (H) 391.1 m^2

(G) 229.1 m^2 (I) 458.2 m^2

9 m

3. What is the area of a regular hexagon with sides 8 cm?

(A) 110.1 cm^2 (B) 166.3 cm^2 (C) 309.0 cm^2 (D) 332.6 cm^2

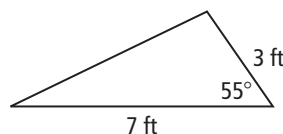**4.** What is the area of a regular nonagon with a radius of 14 in.?

(F) 70.9 in.^{2} (G) 141.7 in.^{2} (H) 566.9 in.^{2} (I) 1211.6 in.^{2}

5. What is the area of a 15-gon with a perimeter of 90 m?

(A) 528.2 m^2 (B) 635.1 m^2 (C) 1270.3 m^2 (D) 142,903.1 m^2

6. What is the area of the triangle at the right?

(F) 6.0 ft^2 (H) 15.0 ft^2

(G) 8.6 ft^2 (I) 17.2 ft^2

3 ft
55°
7 ft

Short Response

7. What is the area of the triangle shown at the right?
Show your work and explain how you got your answer.

5 in.
31°   31°