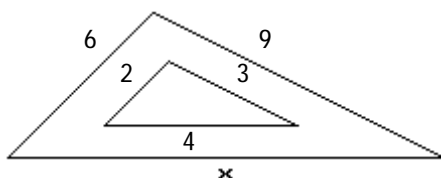Select the letter of the most appropriate answer and shade in the corresponding region on the answer sheet.
A pair of similar triangles is shown. Find the measure of the segment marked with the letter x.
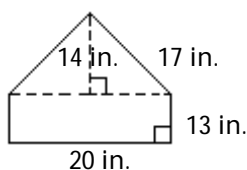
1)

A) x = 11   B) x = 12   C) x = 16   D) x = 4

Find the area.

2)

A) 358 in.^{2} B) 379 in.^{2} C) 540 in.^{2} D) 400 in.^{2}

Find the area. Leave your answer in terms of pi.

3) A circle with diameter 9 cm

A) 20.25π cm^2 B) 81.00π cm^2 C) 18.00π cm^2 D) 9.00π cm^2

4) What is the angle between the hour and the minute hands if the time is 10:10?

A) 300°   B) 360°   C) 245°   D) 240°

5) Find the surface area of a right rectangular prism 3 ft × 4 ft × 2 ft.

A) 64 ft^2 B) 44 ft^2 C) 52 ft^2 D) 26 ft^2

6) Find the volume of a sphere with radius 2.7 in. Use 3.14 for π. Round your answer to the nearest tenth.

A) 30.5 in.^{3} B) 23.0 in.^{3} C) 82.4 in.^{3} D) 92.0 in.^{3}

Solve the problem.

7) If an object has a 60° clockwise rotation as one of its symmetries, then it must also have as a symmetry

A) a 180° rotation.
B) a reflection.
C) a translation.
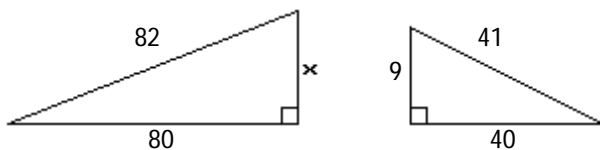D) a 90° clockwise rotation.
E) none of these

Select the letter of the most appropriate answer and shade in the corresponding region on the answer sheet.

A pair of similar triangles is shown. Find the measure of the segment marked with the letter x.

8)

A) x = 13   B) x = 27   C) x = 9   D) x = 18

9) A building is 18 feet tall. Its shadow is 45 feet long. A nearby building is 24 feet tall. Find the length of the shadow of the second building.
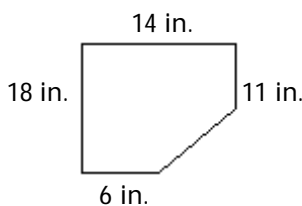
A) 60   B) $\dfrac{135}{4}$ C) 1080   D) $\dfrac{48}{5}$

Find the area.

10)

A) 334 in.^{2} B) 264 in.^{2} C) 224 in.^{2} D) 70 in.^{2}

Find the area. Leave your answer in terms of pi.

11) A circle with diameter 24.8 mi

A) 49.60π mi^2 B) 24.80π mi^2 C) 615.04π mi^2 D) 153.76π mi^2

12) What is the angle between the hour and the minute hands if the time is 9:10?

A) 210°   B) 264°   C) 215°   D) 330°

13) Find the surface area of a right rectangular prism 3 ft × 5 ft × 3 ft.

A) 90 ft^2 B) 39 ft^2 C) 63 ft^2 D) 78 ft^2

Solve the problem.

14) Find the volume of a sphere with radius 3.1 in. Use 3.14 for π. Round your answer to the nearest tenth.
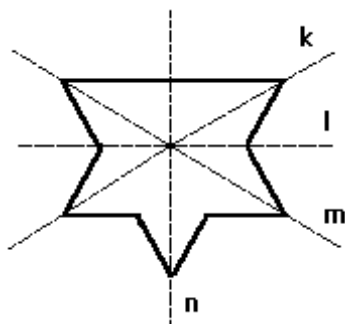
A) 30.0 in.^{3} B) 124.7 in.^{3} C) 40.2 in.^{3} D) 120.0 in.^{3}

Select the letter of the most appropriate answer and shade in the corresponding region on the answer sheet.

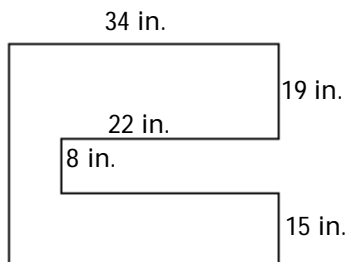15) Which of the lines in the picture are lines of symmetry of the given figure?

   A) l and n   B) k, m, and n   C) n   D) k, l, m, and n

16) A lookout tower casts a shadow 200 feet long at the same time that the shadow of a 8 foot truck is 16 feet long.
    Find the height of the tower.

   A) 100   B) $\frac{16}{25}$ C) 400   D) 128

Find the area of the figure.
   17)

   A) 748 in.^{2} B) 661 in.^{2} C) 1156 in.^{2} D) 1252 in.^{2}

Find the area. Leave your answer in terms of pi.
   18) A semicircle with diameter 20 mi

   A) 40.00π mi^2 B) 20.00π mi^2 C) 50.00π mi^2 D) 100.00π mi^2

19) What is the angle between the hour and the minute hands if the time is 9:20?

   A) 204°   B) 150°   C) 390°   D) 160°

20) Find the surface area of a right rectangular prism 4 ft × 3 ft × 2 ft.

   A) 26 ft^2 B) 46 ft^2 C) 52 ft^2 D) 60 ft^2
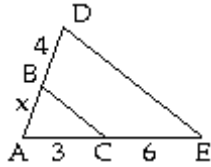
21) Find the volume of a sphere with radius 3.5 in. Use 3.14 for π. Round your answer to the nearest tenth.

   A) 152.0 in.^{3} B) 51.3 in.^{3} C) 179.5 in.^{3} D) 38.0 in.^{3}

Select the letter of the most appropriate answer and shade in the corresponding region on the answer sheet.

A pair of similar triangles is shown. Find the measure of the segment marked with the letter x.

22)

A) x = 1   B) x = 4   C) x = 2   D) x = 3

23) A tree casts a shadow 40 meters long. At the same time, the shadow cast by a vertical 5 meter stick is 10 meters long. Find the height of the tree.
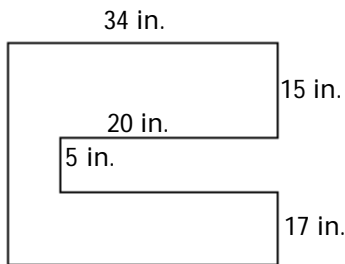
A) 20   B) 80   C) 50   D) $\dfrac{5}{4}$

Find the area of the figure.

24)

A) 640 in.^{2} B) 1088 in.^{2} C) 527 in.^{2} D) 1158 in.^{2}

Find the area. Leave your answer in terms of pi.

25) A semicircle with radius 9.5 in.

A) 45.13π in.^{2} B) 38.00π in.^{2} C) 90.25π in.^{2} D) 19.00π in.^{2}

26) What is the angle between the hour and the minute hands if the time is 9:30?

A) 90°   B) 144°   C) 105°   D) 450°

27) Find the surface area of a right rectangular prism 4 ft × 2 ft × 3 ft.

A) 46 ft^2 B) 44 ft^2 C) 26 ft^2 D) 52 ft^2

Solve the problem.

28) Find the volume of a sphere with radius 3.9 in. Use 3.14 for π. Round your answer to the nearest tenth.

A) 192.0 in.^{3} B) 63.7 in.^{3} C) 248.3 in.^{3} D) 48.0 in.^{3}