

7.G.4: Worksheet

Solutions

1. What's the area of a circle with a diameter of 24 in? $144\pi \text{ in}^2$, or about 452.39 in^2 .

2. What's the area of a circle with a diameter of 5 m? $6.25\pi \text{ m}^2$, or about 19.63 m^2 .

3. Jamie lives in a super weird house—her bedroom is in the shape of a semicircle. She needs to buy new carpet for the whole room. If her straight wall is 14 feet long, how much carpet will she need? $24.5\pi \text{ ft}^2$, or about 76.97 ft^2 of carpet.

4. What's the radius of a circle with a circumference of $15\pi \text{ cm}$? 7.5 cm

5. What's the area of a circle with a circumference of $12\pi \text{ in}$? $36\pi \text{ in}^2$, or about 113.10 in^2 .

6. What's the circumference of a circle with an area of 9 ft^2 ? $6\sqrt{\pi} \text{ in}$, or about 10.63 in .

7. What's the perimeter of the shape in Figure 1?

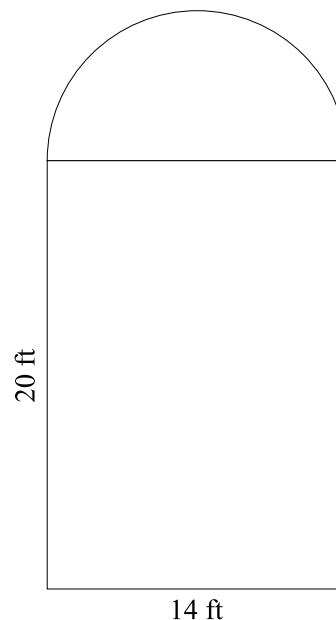


Figure 1.

$54 + 7\pi \text{ ft}$, or about 75.99 ft .

8. Tom accidentally burned a perfectly circular black spot into his wall when he lost control of a frying pan. If the burn mark is exactly 18π inches around its outside, how much paint will he need to cover the whole thing? $81\pi \text{ in}^2$, or about 254.47 in^2 of paint.

9. If a circular porthole on a ship uses $49\pi \text{ in}^2$ of glass, how far across is the porthole? 14 in

10. What's the perimeter of a semicircle with a diameter of 32 m? $32 + 16\pi \text{ m}$, or about 82.27 m .