

## Solving Proportions

Solve each proportion.

$$1) \frac{10}{8} = \frac{n}{10}$$
$$\{12.5\}$$

$$2) \frac{7}{5} = \frac{x}{3}$$
$$\{4.2\}$$

$$3) \frac{9}{6} = \frac{x}{10}$$
$$\{15\}$$

$$4) \frac{7}{n} = \frac{8}{7}$$
$$\{6.13\}$$

$$5) \frac{4}{3} = \frac{8}{x}$$
$$\{6\}$$

$$6) \frac{7}{b+5} = \frac{10}{5}$$
$$\{-1.5\}$$

$$7) \frac{6}{b-1} = \frac{9}{7}$$
$$\{5.67\}$$

$$8) \frac{4}{m-8} = \frac{8}{2}$$
$$\{9\}$$

$$9) \frac{5}{6} = \frac{7n+9}{9}$$
$$\{-0.21\}$$

$$10) \frac{4}{9} = \frac{r-3}{6}$$
$$\{5.67\}$$

$$11) \frac{7}{9} = \frac{b}{b-10}$$

{-35}

$$12) \frac{9}{k-7} = \frac{6}{k}$$

{-14}

$$13) \frac{4}{n+2} = \frac{7}{n}$$

{-4.67}

$$14) \frac{n}{n-3} = \frac{2}{3}$$

{-6}

$$15) \frac{x-3}{x} = \frac{9}{10}$$

{30}

$$16) \frac{5}{r-9} = \frac{8}{r+5}$$

{32.33}

$$17) \frac{p+10}{p-7} = \frac{8}{9}$$

{-146}

$$18) \frac{2}{8} = \frac{n+4}{n-4}$$

{-6.67}

$$19) \frac{n-5}{n+8} = \frac{2}{7}$$

{10.2}

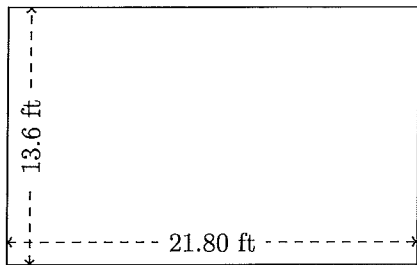
$$20) \frac{n-6}{n-7} = \frac{9}{2}$$

{7.29}

# Perimeter and Area of Rectangles (A) Answers

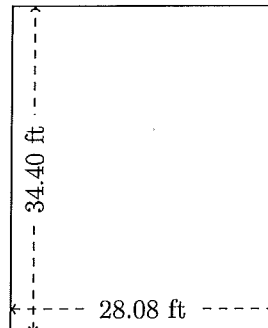
Calculate the perimeter and area for each rectangle.

1.



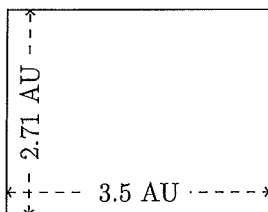
$$P = 70.8 \text{ ft}$$
$$A = 296.48 \text{ ft}^2$$

2.



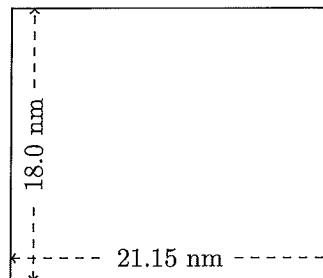
$$P = 124.96 \text{ ft}$$
$$A = 965.952 \text{ ft}^2$$

3.



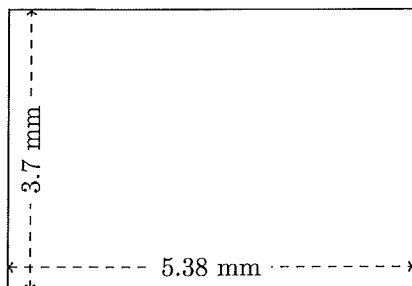
$$P = 12.42 \text{ AU}$$
$$A = 9.485 \text{ AU}^2$$

4.



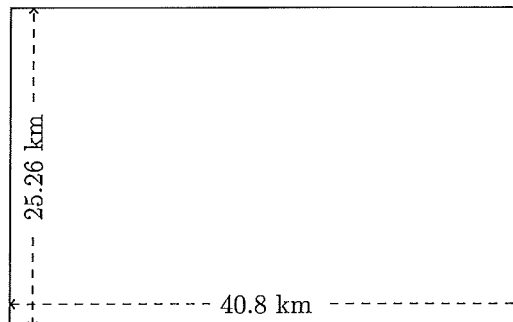
$$P = 78.3 \text{ nm}$$
$$A = 380.7 \text{ nm}^2$$

5.



$$P = 18.16 \text{ mm}$$
$$A = 19.906 \text{ mm}^2$$

6.

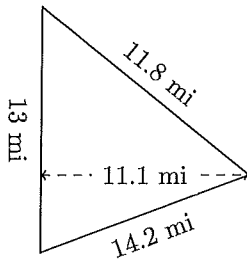


$$P = 132.12 \text{ km}$$
$$A = 1030.608 \text{ km}^2$$

# Perimeter and Area of Triangles (A) Answers

Calculate the perimeter and area for each triangle.

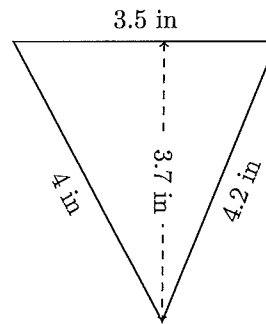
1.



$$P = 39 \text{ mi}$$

$$A = 72.15 \text{ mi}^2$$

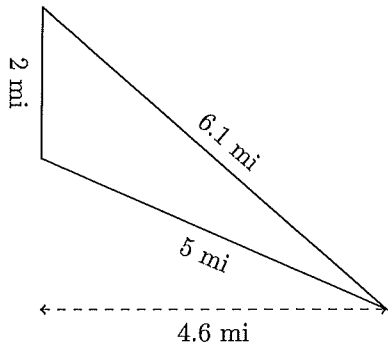
2.



$$P = 11.7 \text{ in}$$

$$A = 6.475 \text{ in}^2$$

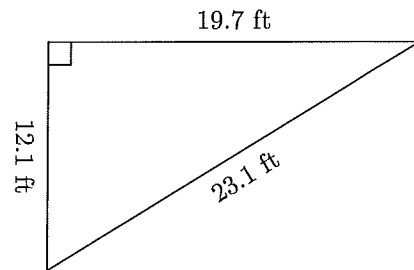
3.



$$P = 13.1 \text{ mi}$$

$$A = 4.6 \text{ mi}^2$$

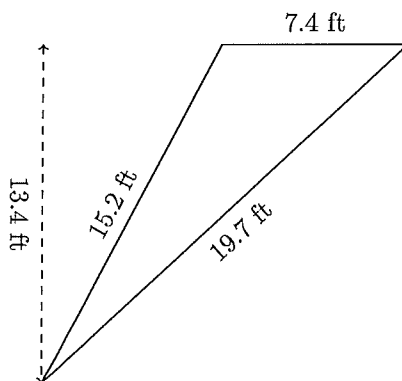
4.



$$P = 54.9 \text{ ft}$$

$$A = 119.185 \text{ ft}^2$$

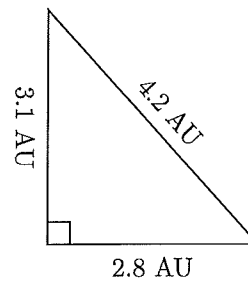
5.



$$P = 42.3 \text{ ft}$$

$$A = 49.58 \text{ ft}^2$$

6.

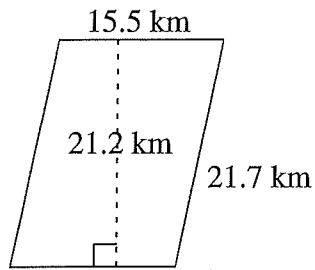


$$P = 10.1 \text{ AU}$$

$$A = 4.34 \text{ AU}^2$$

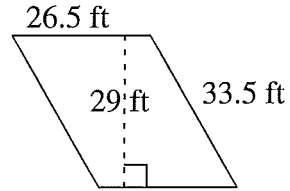
# Area and Perimeter of Parallelograms (A) Answers

Find the area and perimeter of each parallelogram.



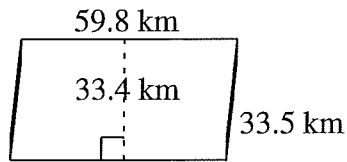
$$A = 328.60 \text{ km}^2$$

$$P = 74.4 \text{ km}$$



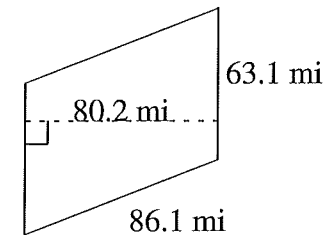
$$A = 768.5 \text{ ft}^2$$

$$P = 120.0 \text{ ft}$$



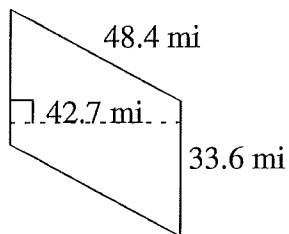
$$A = 1997.32 \text{ km}^2$$

$$P = 186.6 \text{ km}$$



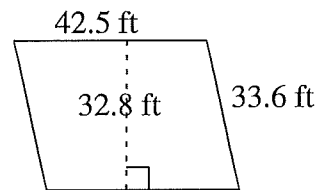
$$A = 5060.62 \text{ mi}^2$$

$$P = 298.4 \text{ mi}$$



$$A = 1434.72 \text{ mi}^2$$

$$P = 164.0 \text{ mi}$$

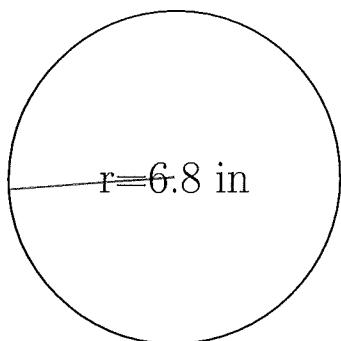


$$A = 1394.00 \text{ ft}^2$$

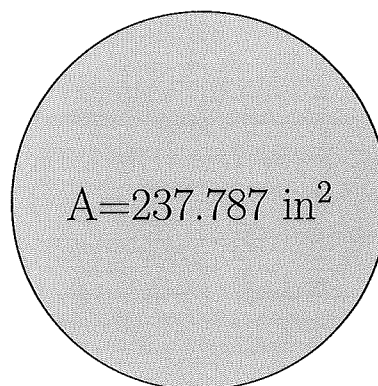
$$P = 152.2 \text{ ft}$$

## Circle Measurements (A) Answers

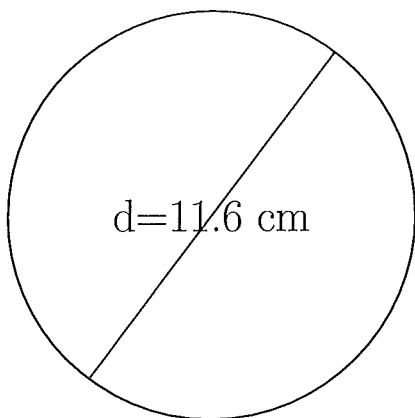
Calculate each circles measurements using the given measurement.



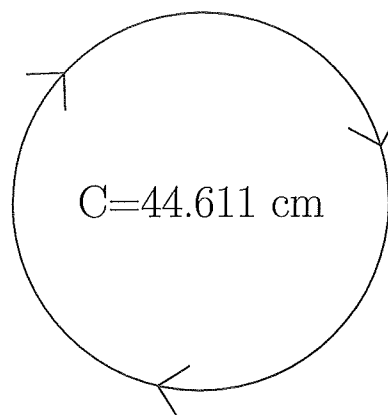
radius =		<u>6.8 in</u>
diameter =		<u>13.6 in</u>
circumference =		<u>42.726 in</u>
area =		<u>145.267 in<sup>2</sup></u>



radius =		<u>8.7 in</u>
diameter =		<u>17.4 in</u>
circumference =		<u>54.664 in</u>
area =		<u>237.787 in<sup>2</sup></u>



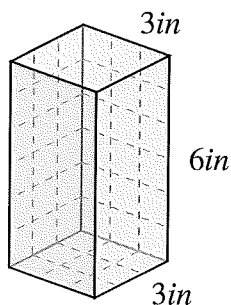
radius =		<u>5.8 cm</u>
diameter =		<u>11.6 cm</u>
circumference =		<u>36.442 cm</u>
area =		<u>105.683 cm<sup>2</sup></u>



radius =		<u>7.1 cm</u>
diameter =		<u>14.2 cm</u>
circumference =		<u>44.611 cm</u>
area =		<u>158.368 cm<sup>2</sup></u>

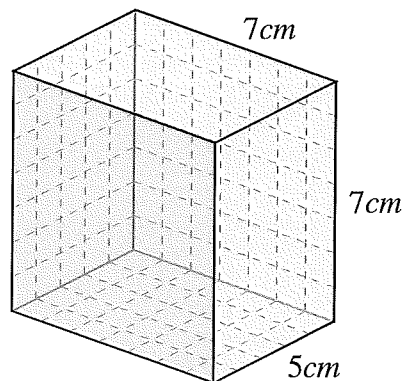
## Volume and surface area of prisms (A) Answers

Find the volume and surface area of each prism.



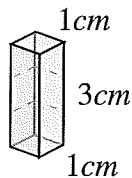
$$V: 3in \times 3 \times 6in = 54in^3$$

$$SA: 2 \times (9 + 18 + 18)in = 90in^2$$



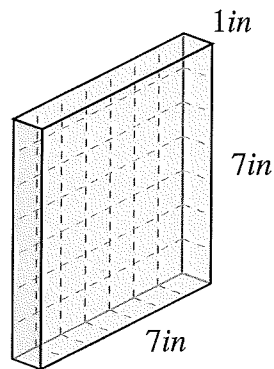
$$V: 5cm \times 7 \times 7cm = 245cm^3$$

$$SA: 2 \times (35 + 49 + 35)cm = 238cm^2$$



$$V: 1cm \times 1 \times 3cm = 3cm^3$$

$$SA: 2 \times (1 + 3 + 3)cm = 14cm^2$$



$$V: 7in \times 1 \times 7in = 49in^3$$

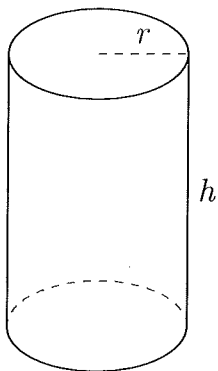
$$SA: 2 \times (7 + 7 + 49)in = 126in^2$$

# Area and Volume of Cylinders (A) Answers

Calculate the surface area and volume for each cylinder.

$$\text{Surface Area} = (\pi r^2 \times 2) + (\pi d \times h) \quad \text{Volume} = \pi r^2 \times h \quad d = 2r$$

1.

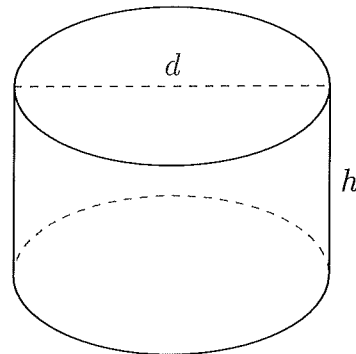


$$r = 1.2 \text{ km} \quad h = 3.6 \text{ km}$$

$$\text{Surface Area} = 36.19 \text{ km}^2$$

$$\text{Volume} = 16.29 \text{ km}^3$$

2.

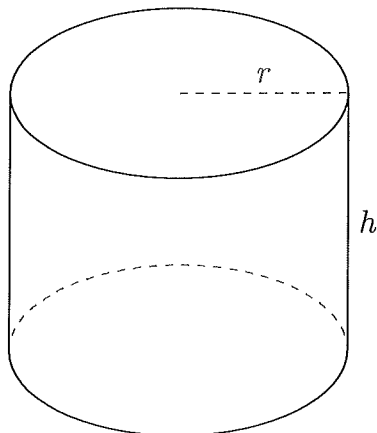


$$d = 12.6 \text{ cm} \quad h = 7.5 \text{ cm}$$

$$\text{Surface Area} = 546.26 \text{ cm}^2$$

$$\text{Volume} = 935.17 \text{ cm}^3$$

3.

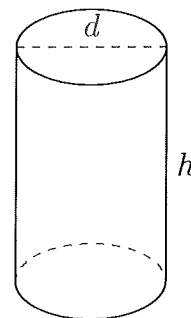


$$r = 18 \text{ ft} \quad h = 27.2 \text{ ft}$$

$$\text{Surface Area} = 5112 \text{ ft}^2$$

$$\text{Volume} = 27,686.23 \text{ ft}^3$$

4.



$$d = 12 \text{ m} \quad h = 18.6 \text{ m}$$

$$\text{Surface Area} = 927.4 \text{ m}^2$$

$$\text{Volume} = 2103.61 \text{ m}^3$$

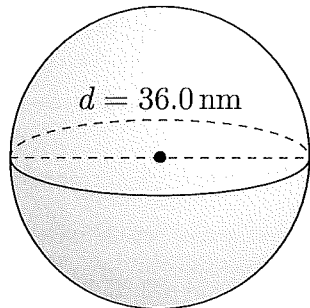


# Surface Area and Volume of Spheres (A) Answers

Calculate the surface area and volume for each sphere.

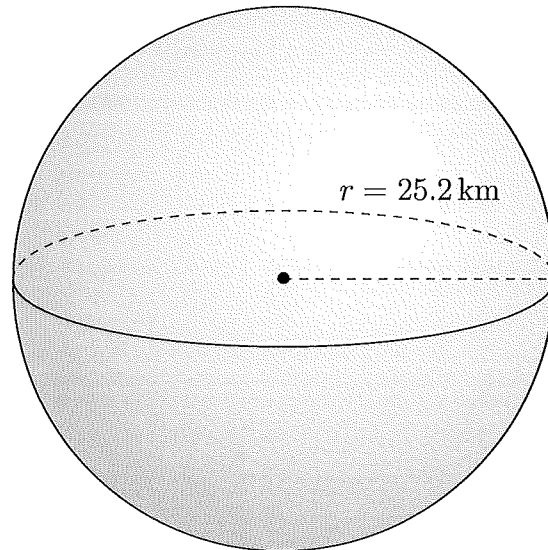
$$\text{Surface Area} = 4\pi r^2 \quad \text{Volume} = \frac{4}{3}\pi r^3$$

1.



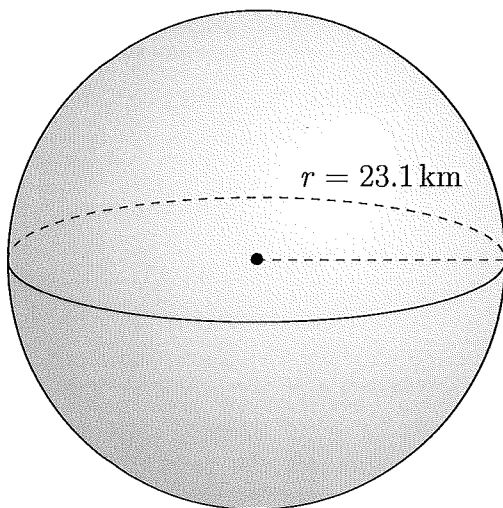
$$\begin{aligned} \text{Surface Area: } & 4071.5 \text{ nm}^2 \\ \text{Volume: } & 24,429.0 \text{ nm}^3 \end{aligned}$$

2.



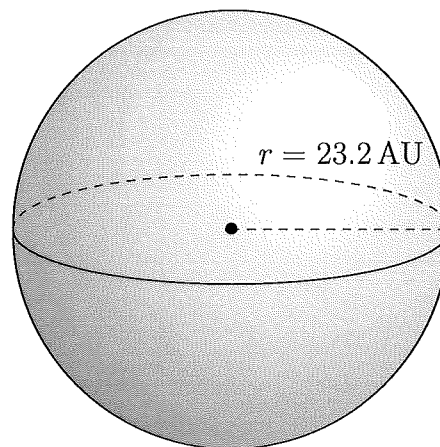
$$\begin{aligned} \text{Surface Area: } & 7980.1 \text{ km}^2 \\ \text{Volume: } & 67,033.2 \text{ km}^3 \end{aligned}$$

3.



$$\begin{aligned} \text{Surface Area: } & 6705.5 \text{ km}^2 \\ \text{Volume: } & 51,632.7 \text{ km}^3 \end{aligned}$$

4.



$$\begin{aligned} \text{Surface Area: } & 6763.7 \text{ AU}^2 \\ \text{Volume: } & 52,306.1 \text{ AU}^3 \end{aligned}$$