

12.5

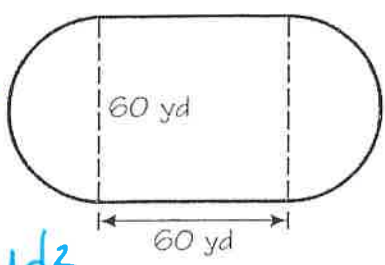
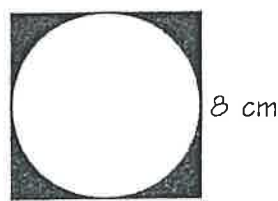
Key

# Did You Hear About . . .

1	The	2	Witch	3	Who	4	Casts	5	Spells
6	with	7	her	8	time	9	hex	10	Watch?

Solve each problem and find your answer in the answer column (some answers are rounded). Write the word next to the answer in the box containing the problem number.

<p>1 Radio station KLVU broadcasts in all directions to a distance of 50 mi. How many square miles are in the station's broadcast area? <b>7850 mi<sup>2</sup></b></p> <p>2 How much lace edging is needed to go around a circular tablecloth with a diameter of 6 ft? <b>18.84 ft</b></p> <p>3 Pizzazz Pizza sells a small pizza for \$10.99. It has a diameter of 10 in. What is the price per square inch? <b>\$.14</b></p> <p>4 A round manhole cover has a diameter of 3 ft. It weighs 9.2 lb per square foot. To the nearest pound, how much does the manhole cover weigh? <b>65 lbs.</b></p> <p>5 Find the area of the circle at the right. <b>50.24 cm<sup>2</sup></b></p> <p>6 Find the area of the shaded region in the figure at right. <b>13.76 cm<sup>2</sup></b></p> <p>7 A revolving water sprinkler sprays water in all directions to a distance of 22 ft. What area of lawn does it cover? (Round to the nearest whole number.) <b>1520 ft<sup>2</sup></b></p> <p>8 The orbit of the space shuttle is approximately a circle with a radius of 4100 mi. How far do the astronauts travel with each orbit? <b>25,748 mi</b></p> <p>9 Find the distance around the track at right. <b>308.4 yd.</b></p> <p>10 The area inside the track is going to be planted with sod. How many square yards of sod will be needed? <b>6426 yd<sup>2</sup></b></p>	<p>24,608 mi • MAGIC</p> <p>58 lb • MIXES</p> <p>308.4 yd • HEX</p> <p>\$0.14 • WHO</p> <p>5876 yd<sup>2</sup> • BLOOD</p> <p>1520 ft<sup>2</sup> • HER</p> <p>19.24 ft • VAMPIRE</p> <p>7850 mi<sup>2</sup> • THE</p> <p>18.96 cm<sup>2</sup> • WHEN</p> <p>\$0.17 • FROM</p> <p>65 lb • CASTS</p> <p>25,748 mi • TIME</p> <p>1650 ft<sup>2</sup> • POTIONS</p> <p>18.84 ft • WITCH</p> <p>8140 mi<sup>2</sup> • AN</p> <p>13.76 cm<sup>2</sup> • WITH</p> <p>6426 yd<sup>2</sup> • WATCH</p> <p>326 yd • BROOM</p> <p>50.24 cm<sup>2</sup> • SPELLS</p>
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12.5 Did you Hear About...

$$\begin{aligned} 1) A &= \pi r^2 \\ &= (3.14)(50)^2 \\ &= (3.14)(2500) \\ &= 7850 \text{ Mi}^2 \end{aligned}$$

$$\begin{aligned} 2) C &= \pi D \\ &= (3.14)(6) \\ &= 18.84 \text{ ft} \end{aligned}$$

$$\begin{aligned} 3) A &= \pi r^2 \\ &= (3.14)(5)^2 \\ &= (3.14)(25) \\ &= 78.5 \text{ in}^2 \end{aligned}$$

$$\$10.99 \div 78.5 = \$0.14/\text{in}^2$$

$$\begin{aligned} 4) A &= \pi r^2 \\ &= (3.14)(1.5)^2 \\ &= (3.14)(2.25) \\ &= 7.065 \text{ ft}^2 \end{aligned}$$

$$7.065 * 9.2 \approx 65 \text{ lbs}$$

$$\begin{aligned} 5) A &= \pi r^2 \\ &= (3.14)(4)^2 \\ &= (3.14)(16) \\ &= 50.24 \text{ cm}^2 \end{aligned}$$

$$\begin{array}{r} 6) A = b \cdot h \quad 64.00 \\ = (8)(8) \quad -50.24 \\ = 64 \text{ cm}^2 \quad 13.76 \text{ cm}^2 \\ \text{(square)} \end{array}$$

$$\begin{aligned} 7) A &= \pi r^2 \\ &= (3.14)(22)^2 \\ &= (3.14)(484) \\ &= 1520 \text{ ft}^2 \end{aligned}$$

$$\begin{aligned} 8) C &= 2\pi r \\ &= 2(3.14)(4100) \\ &= 25,748 \text{ Mi} \end{aligned}$$

9)	<u>Circle:</u>	<u>Straight sides:</u>	<u>combined:</u>
	$C = \pi D$	$(60)(2)$	188.4
	$= (3.14)(60)$	120 yd	+ 120.0
	$= 188.4 \text{ yd}$		<u>308.4 yd</u>

10)	<u>Circle:</u>	<u>inner square:</u>	<u>combined:</u>
	$A = \pi r^2$	$A = b \cdot h$	2826
	$= (3.14)(30)^2$	$= (60)(60)$	+ 3600
	$= (3.14)(900)$	$= 3600 \text{ yd}^2$	<u>6426 yd<sup>2</sup></u>
	$= 2826 \text{ yd}^2$		