Circle Word Problems Worksheets

1. Mary and Margaret are looking at a map of a running path in a local park. Which is the shorter path from *E* to *F*, along the two semicircles or along the larger semicircle? If one path is shorter, how much shorter is it? Let $\pi \approx 3.14$



2. Alex the electrician needs 34 yards of electrical wire to complete a job. He has a coil of wiring in his workshop. The coiled wire is 18 inches in diameter and is made up of 21 circles of wire. Will this coil be enough to complete the job? Let $\pi \approx 3.14$



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A semicircle has half of the circumference of a circle. The circumference of the large semicircle is $C = \frac{1}{2}\pi \cdot 4$ km, or 6.28 km. The diameter of the two smaller semicircles is 2 km. The total circumference would be the same as the circumference for a whole circle with the same diameter. If $C = \pi \cdot 2$ km, then C = 6.28 km. The distance around the larger semicircle is the same as the distance around both of the semicircles. So, both paths are equal in distance.

2. Alex the electrician needs 34 yards of electrical wire to complete a job. He has a coil of wiring in his workshop. The coiled wire is 18 inches in diameter and is made up of 21 circles of wire. Will this coil be enough to complete the job? Let $\pi \approx 3.14$



The circumference of the coil of wire is $C = \pi \cdot 18$ in., or approximately 56.52 in. If there are 21 circles of wire, then the number of circles times the circumference will yield the total number of inches of wire in the coil. If 56.52 in. $\cdot 21 \approx 1186.92$ in., then $\frac{1186.92 \text{ in.}}{36 \text{ in.}} \approx 32.97 \text{ yd.}$ (1 yd. =

3 ft. = 36 in. When converting inches to yards, you must divide the total inches by the number of inches in a yard, which is 36 inches.)

Alex will not have enough wire for his job in this coil of wire.

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