→ $C = \pi d$ ←

MIDDLE SCHOOL MATH WITH PIZZAZZ! BOOK D
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Answers A – I:

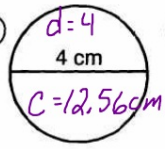
18.84 ft	GUY
71.8 ft	HELPED
~~1,570~~ m	BOX
51 ft	HAMBURGER
11.932 cm	A
~~12.56~~ cm	THE
~~44~~ ft	VEGETABLES
13.188 m	WHO
1,630 m	BIG
282.6 m	SILLY
31.4 cm	OF
62.8 ft	DUMPED
11.542 cm	OFF

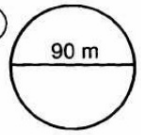
Did You Hear About...

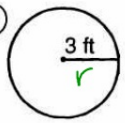
A THE	B	C	D	E	F
G BOX	H	I VEGETABLES	J	K	L GROUND
M	N HE	O	P PEAS	Q ON	R EARTH ?

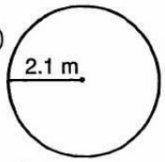
Find each answer in the appropriate answer column and notice the word under it. Write this word in the box containing the letter of the exercise.

I. Find the circumference of each circle. Use 3.14 for π.

(A) 

(B) 

(C) 

(D) 

(E) $d = 20$ ft (F) $d = 3.8$ cm (G) $r = 250$ m (H) $r = 5$ cm

II. Find the circumference of each circle. Use $\frac{22}{7}$ for π.

(I) $d = 14$ ft (J) $d = 28$ in. (K) $d = 49$ mm (L) $d = 10\frac{1}{2}$ ft

(M) $r = 21$ mm (N) $r = 3\frac{1}{2}$ in. (O) $r = 105$ mm (P) $r = \frac{3}{4}$ in.

III. Solve. Use 3.14 for π.

(Q) The wheels on a bicycle have a diameter of 27 in. How far does the bicycle travel with each turn of the wheels?

RADIUS = 6

(R) The minute hand of a large clock is 6 ft long. How far does the point of the hand move in one hour?

Answers J – R:

$5\frac{2}{7}$ in.	FRESH
~~22~~ in.	HE
~~37.68~~ ft	EARTH
88 in.	ON
34.5 ft	SUBMARINE
660 mm	WANTED
132 mm	BECAUSE
~~84.78~~ in.	ON
154 mm	THE
720 mm	JUMPED
$4\frac{5}{7}$ in.	PEAS
143 mm	TOP
~~33~~ ft	GROUND

$C = \pi d$

(A) $\pi = 3.14$, $d = 4$

$3.14(4) = 12.56$

(I) $\pi = \frac{22}{7}$, $d = 14$

$\frac{22}{7}\left(\frac{14}{1}\right) = \frac{22 \cdot 14}{7 \cdot 1} = \frac{308}{7}$

$308 \div 7 = 44$

(P) $r = \frac{3}{4}$, $\pi = \frac{22}{7}$

$\frac{3}{4} + \frac{3}{4} = \frac{3+3}{4} = \frac{6}{4}$

$d = \frac{6}{4}$ → $\frac{6}{4} \cdot \frac{22}{7} = \frac{3 \cdot 11}{\cancel{4} \cdot 7} = \frac{33}{7} = 4\frac{5}{7}$

(J) $\pi = \frac{22}{7}$, $d = 28$

$C = \frac{22}{7}(28) = \frac{22 \cdot \cancel{28}^{4}}{\cancel{7} \cdot 1} = \frac{616}{7} = 88$

$616 \div 7$

$\frac{22 \cdot 4}{1 \cdot 1} = 88$

(L) $C = \pi d$ $\pi = \frac{22}{7}$ $d = 10\frac{1}{2} = \frac{21}{2}$

$\frac{22}{7} \cdot \frac{21}{2} = \frac{\overset{11}{\cancel{22}} \cdot \overset{3}{21}}{\cancel{7} \cdot \cancel{2}} = \frac{462}{14} = 33$

$\frac{11 \cdot 3}{1} = 33$

(M) $r = 21$, $\pi = \frac{22}{7}$

$d = 42$

$\frac{22}{\cancel{7}_{1}} \cdot \frac{\overset{6}{\cancel{42}}}{1} = 132$

$C = \pi d$

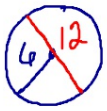
(G) $\pi = 3.14, r = 250$

$d = 500$

$C = 3.14(500) = 1570$

(R) $\pi = 3.14, r = 6$

$d = 12$



$3.14(12) = 37.68$

πd

(Q) $\pi = 3.14, d = 27$

$3.14(27) = 84.78$

(P) $\pi = \frac{22}{7}, r = \frac{3}{4}, d = \frac{6}{4}$

$\frac{22}{7}\left(\frac{6}{4}\right) = \frac{\overset{11}{\cancel{22}} \cdot \overset{3}{\cancel{6}}}{7 \cdot \underset{2}{\cancel{4}}_{1}} = \frac{33}{7} = 4\frac{5}{7}$

(N) $\pi = \frac{22}{7}, r = 3\frac{1}{2}$ $C = \pi d$

$d = 7$

$\frac{22}{7}\left(\frac{7}{1}\right) = \frac{22 \cdot \overset{1}{\cancel{7}}}{\underset{1}{\cancel{7}} \cdot 1} = \frac{22}{1} = 22$

$$C = \pi d$$

(L) $\pi = \frac{22}{7}$, $d = 10\frac{1}{2}$

$$\frac{22}{7}\left(\frac{21}{2}\right) = \frac{\overset{11}{\cancel{22}} \cdot \overset{3}{\cancel{21}}}{\underset{1}{\cancel{7}} \cdot \underset{1}{\cancel{2}}} = \frac{33}{1} = 33$$