



DeKalb County Schools
Accelerated 7B-8
Unit 1
Post-Assessment

Part A: Selected Response

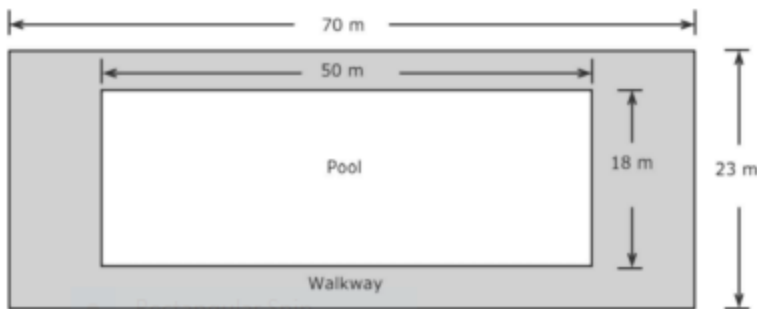
1. MGSE7.G.4:

A boy is 4 feet 8 inches tall. If he could walk around the Earth one time on the equator, the top of his head would travel farther than his feet. If the equator is a perfect circle, how farther would the top of his travel than his feet (in inches)?

- a) 112 π
- b) 96 π
- c) 56 π
- d) 3136 π

2. MGSE7. G.6:

A rectangular shaped swimming pool has a paved walkway around it as shown.



How much concrete was needed to pave the walkway?

- a) 100 m²
- b) 161 m²
- c) 710 m²
- d) 1610 m²



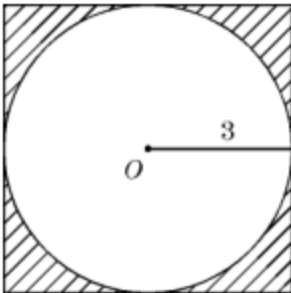
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3. MGSE7.G.6:

A round dining table has a diameter of 2.5 meters. A round tablecloth has a diameter of 3.5 meters. What is the area to the nearest tenth of a meter of the part of the tablecloth that will hang down the side of the table?

- a) 18.8 m^2
- b) 6.3 m^2
- c) 4.7 m^2
- d) 1.0 m^2

4. MGSE7.G.4:



A circular painting is on display at an art museum. The painting has a radius of 3 inches and is inscribed in a square wooden frame. What is the measurement of the shaded region?

- a) 3.86 in^2
- b) 7.73 in^2
- c) 28.27 in^2
- d) 32.86 in^2

5. MGSE7.G.6:

Jamal has two rubix cube with edges 3 ft. and 6 ft., respectively. How many times bigger is the volume of the larger cube to the smaller cube?

- a) 2
- b) 4
- c) 6
- d) 8



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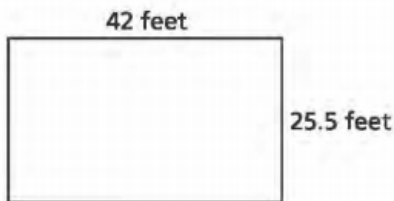
6. MGSE7.G.4:

A round dining table has a diameter of 2.5 meters. A round tablecloth has a diameter of 3.5 meters. What is the area to the nearest tenth of a meter of the part of the tablecloth that will hang down the side of the table?

- a) 18.8 m^2
- b) 6.3 m^2
- c) 4.7 m^2
- d) 1.0 m^2

7. MGSE7.G.6:

Wallpaper was applied to one rectangular wall of a large room. The dimensions of the wall are shown below.



If the total cost of the wallpaper was \$771.12, what was the cost, in dollars of the wallpaper per square foot?

- a) \$0.61
- b) \$0.72
- c) \$1.39
- d) \$1.65

8. MGSE7.G.4:

A circular has a diameter of 12 feet. How many bags of topsoil must Linda buy to cover the garden if one bag covers an area of 3 square feet?

- a) 13
- b) 38
- c) 40
- d) 151



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Part B: Constructed Response Items

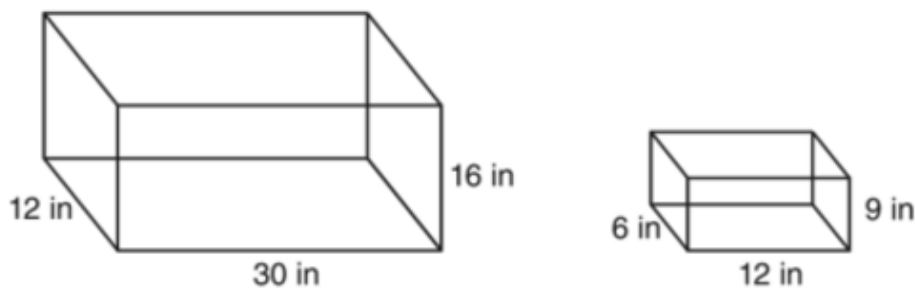
For questions 9 & 10; read each problem carefully and use UPS Check to solve each problem. Show your mathematical thinking and record your final solution.

9. MGSE7.G.4:

You are trying to decide where to buy pizza. Pizza Shop A advertises a pizza with a 14-inch diameter. Pizza Shop B advertises a pizza with a 42-inch circumference. Both pizzas are the same price. Which Pizza Shop gives you more pizza for the price? Show your work and explain your reasoning in 2 complete sentences to prove your answer.

10. MGSE7.G.6:

The diagram below represents Joe's two fish tanks.



Joe's larger tank is completely filled with water. He takes water from it to completely fill the small tank. Determine how many cubic inches of water will remain in the larger tank.



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Answer KEY:

Points	Item	Answer
1 point	1	A
1 point	2	C
1 point	3	C
1 point	4	B
1 point	5	D
1 point	6	C
1 point	7	B
1 point	8	B
3 points	9	Student calculates area 153.86 in^2 and 140.45 in^2 , circumference 43.96 in and 42 in),or radius (7 in and 6.69 in) for both pizzas
4 points	10	Large Tank: $5,760 \text{ in}^3$ Small Tank: 648 in^3 Difference between the volumes: $5,112 \text{ in}^3$



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Points	Item 9 Description
3	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a complete understanding of finding the area and circumference of a circle. • Give 3 points for three parts answered correctly. <ul style="list-style-type: none"> ○ Response is correct and complete. ○ Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a partial understanding of finding the area and circumference of a circle. • Give 2 points for two parts answered correctly. <ul style="list-style-type: none"> ○ Response is partially correct. ○ Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. <p>Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.</p>
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a minimal understanding of finding the area and circumference of a circle. • Give 1 point for one part answered correctly. <ul style="list-style-type: none"> ○ Response is only partially correct. ○ Response shows incomplete or inaccurate application of a relevant strategy. <p>Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.</p>
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates limited to no understanding of finding the area and circumference of a circle. • Give 0 points for all parts answered incorrectly. <ul style="list-style-type: none"> ○ Response is incorrect and shows no application of a strategy. <p>Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.</p>



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Points	Item 10 Description
4	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a complete understanding of finding the area of geometric figures. • Give 4 points for four parts answered correctly. <ul style="list-style-type: none"> ○ Response is correct and complete. ○ Response shows application of a reasonable and relevant strategy. • Mathematical ideas are expressed coherently through a clear, complete, logical, and fully developed response using words, calculations, and/or symbols as appropriate.
3	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a nearly complete understanding of finding the area of geometric figures. • Give 3 points for three parts answered correctly. <ul style="list-style-type: none"> ○ Response is mostly correct but contains either a computation error or an unclear or incomplete explanation. ○ Response shows application of a relevant strategy, though it may be only partially applied or it may remain unexplained. <p>Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.</p>
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a partial understanding of finding the area of geometric figures. • Give 2 points for two parts answered correctly. <ul style="list-style-type: none"> ○ Response is partially correct. ○ Response shows application of a relevant strategy, though it may be only partially applied or remain unexplained. <p>Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.</p>
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates a minimal understanding of finding the area of geometric figures. • Give 1 point for one part answered correctly. <ul style="list-style-type: none"> ○ Response is only partially correct. ○ Response shows incomplete or inaccurate application of a relevant strategy. <p>Mathematical ideas are expressed only partially using words, calculations, and/or symbols as appropriate.</p>
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> • The response demonstrates limited to no understanding of finding the area of geometric figures. • Give 0 points for all parts answered incorrectly. <ul style="list-style-type: none"> ○ Response is incorrect and shows no application of a strategy. <p>Mathematical ideas cannot be interpreted or lack sufficient evidence to support even a limited understanding.</p>