Important Concepts . . .

Preview Review

Mathematics Grade 7 TEACHER KEY

W3 - Quiz

V6-10

Important Concepts of Grade 7 Mathematics

W1 - Lesson 1 .....Divisibility Rules
W1 - Lesson 2 ..... Decimal Numbers
W1 - Lesson 3 .....Fractions
W1 - Lesson 4 ..... Improper Fractions, Mixed Numbers,Percents, and Decimals
W1 - Lesson 5 .....Integers, Number Lines, and Sequencing
W1 - Quiz

W2 - Lesson 1 ..... Table of Values and Graphing Linear Equations
W2 - Lesson 2 .....Modeling Expressions, Equations, and the Preservation of Equality
W2 - Lesson 3 ..... Algebra and Linear Equations
W2 - Lesson 4 .....Statistics
W2 - Lesson 5 ..... Circle Graphs and Calculating Probability
W2 - Quiz

W3 - Lesson 1 ..... Circles
W3 - Lesson 2 ..... Area of Triangles and Parallelograms
W3 - Lesson 3 .....Line Segments
W3 - Lesson 4 ..... Parts and Plotting on a Cartesian Plane
W3 - Lesson 5 .....Transformations
W3 - Quiz

Materials Required

Math Set
Calculator

No Textbook Required

This is a stand-alone course.

Mathematics Grade 7
Version 6
Preview/Review W3 - Quiz
ISBN 1-894894-75-8

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Preview/Review Concepts for Grade Seven Mathematics

Teacher Key

W3 – Quiz:

Introductory Information for Teachers

Preview/Review courses are aimed mainly at students who have completed the regular course but who need to review some of the material before beginning the next grade. Other students may find Preview/Review courses useful in preparing for the new concepts they will study in their next grade.

No Preview/Review course is intended to replace the regular course because each covers only what the writers have decided are the top 15 concepts from the Program of Studies for that course.

Preview/Review materials are intended for use by teachers and students in one-subject and one-grade classrooms. This Preview/Review course contains fifteen lessons in three sections. Each section has five lessons. A short quiz is provided at the end of each section to test student knowledge of the material studied. In a classroom the course will likely be completed in three weeks.

This Preview/Review course is written to be stand-alone. There is no textbook required.

Value 50

W3 – Quiz

1. The diameter of a wheel is 35cm. A rock stuck in the wheel creates a scratch on the floor every time it hits.

(3) a. How far apart will the scratches be on the floor?

***C* = πd**
= (3.14)(35)
= 109.9cm

The scratches will be 109.9 cm apart.

(3) b. How many scratches would there be if the wheel travelled 50m (1m = 100cm)?

50m = 5000cm
5000 ÷ 109.9 = 45.5

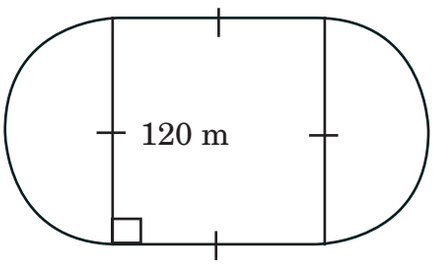
After 50m, there would be 45 scratches on the floor. There is half a turn left before another scratch is made.

(5) 2. What is the total distance of this track?

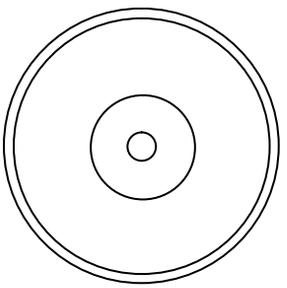
***C*= πd**
= (3.14)(120)
= 376.8m

120 + 120 + 376.8 = 616.8m

The track is 616.8m long.



(5) 3. In their study of trees, a class measured the growth rings within a trunk. If the center ring has a **diameter** of 8cm and the next layers were 9cm, 7cm, 5cm, 3cm and 1cm, what was the **circumference** of the tree trunk?



d = 2(4 + 9 + 7 + 5 + 3 + 1) = 58cm

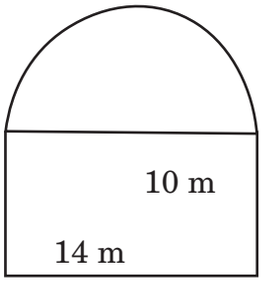
***C* = πd**
= (3.14)(58)
= 182.1 cm

The tree had a circumference of 183.1 cm. Also, the radius could be calculated first.

(3) 4. A piece of wood cut into a parallelogram coffee table has an area of 48 dm^2. What are three possible whole number measurement combinations of the table? (Example: 10×5)

1 x 48,or
2 x 24, or
3 x 16, or
4 x 12, or
6 x 8

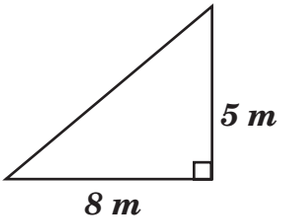
(7) 5. A stained-glass window is a rectangle and a half circle as shown. What is the area of glass needed?



$A = b \times h$ $\quad$ $\frac{1}{2} A = \pi r^2$
$= (15)(10)$ $\quad$ $= \frac{1}{2} (3.14)(7)(7)$
$= 140\ m^2$ $\quad$ $= 76.9\ m^2$

$A = 140 + 76.9 = 216.9\ m^2$

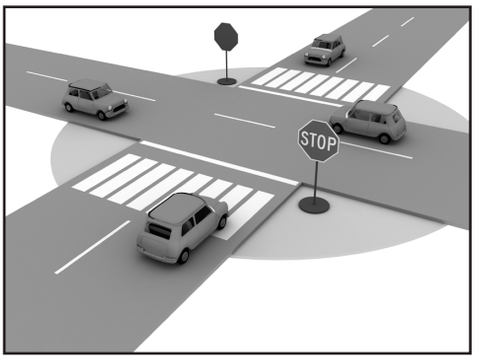
(3) 6. What is the area of the following triangle?



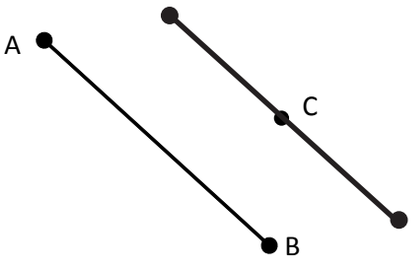
$A = \frac{1}{2}\ b\ h$
$= \frac{1}{2}\ (8\ m)(5m)$
$= \frac{1}{2}\ 40\ m^2$
$= 20\ m^2$

(2) 7. Pam says an intersection is a great example of parallel lines. Is she correct? Why or why not?

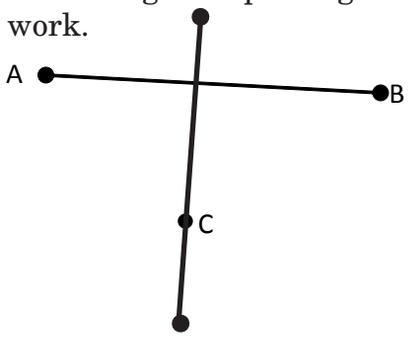
No, she is incorrect. Parallel lines never cross. An intersection is a better example of a perpendicular line.



(2) 8. Draw a line segment passing through point C that is parallel to $\overline{AB}$. Show your work



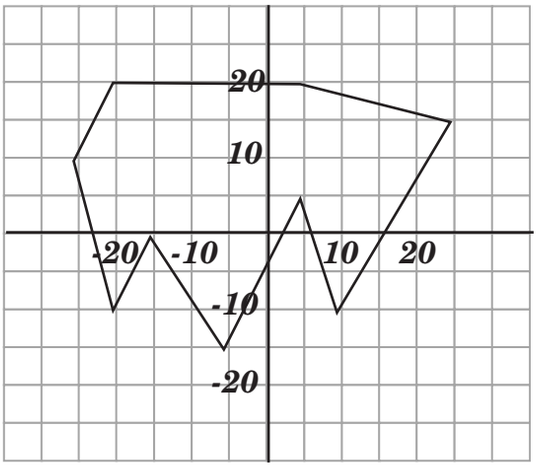
(2) 9. Draw a line segment passing through point C that is perpendicular to $\overline{AB}$. Show your work.



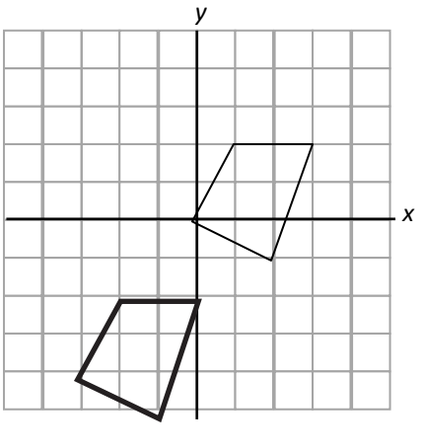
(2) 10. a. Draw a Cartesian plane using an appropriate unit for the axes.

(5) b. Plot the following points.

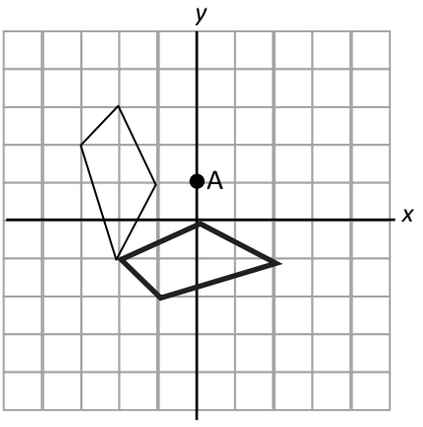
(-20, 20), (-25, 10), (-20, -10), (-15, 0), (-5, -15), (5, 5), (10, -10), (25, 15), (5, 20)



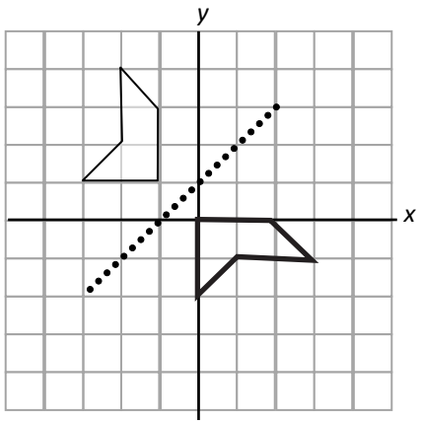
(2) 11. Translate the figure (-3, -4).



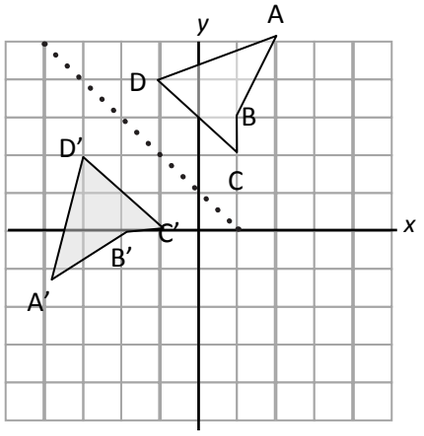
(2) 12. Rotate the figure -270° about point A.



(2) 13. Reflect the figure across the given line.



(2) 14. Draw the line of reflection.



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