

Name KEY

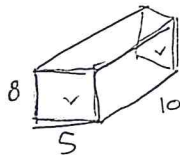
# Math 8 Written Final Exam Practice

Each of the written questions will be on a 4 point scale seen below:

1	2	3	4
<ul style="list-style-type: none"> <li>Did not get the correct answer, but made a basic attempt (ie. drawing problem)</li> </ul>	<ul style="list-style-type: none"> <li>Did not get the correct answer, but made a solid attempt to find the solution with more than just a basic attempt (ie. drawing problem, numerical manipulation and creation of equations)</li> </ul>	<ul style="list-style-type: none"> <li>Correct answer</li> <li>Shows the process of getting the correct answer however, missing some details in flow of answer</li> </ul>	<ul style="list-style-type: none"> <li>Correct answer</li> <li>Shows the process of getting the correct answer in detail</li> </ul>

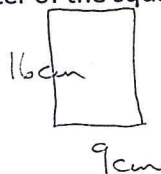
Practice questions:

- The two ends of a right rectangular prism have a length of 5 cm and a height of 8 cm. The total length of the prism is 10 cm. Draw the shape below, and calculate the total area of each of the prism.



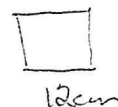
$$\begin{array}{r}
 2(8 \cdot 5) \quad 80 \\
 2(5 \cdot 10) \quad 100 \\
 2(8 \cdot 10) \quad + 160 \\
 \hline
 340 \text{ cm}
 \end{array}$$

- A square and a rectangle have the same area. The rectangle has length 9cm and height 16 cm. Find the area and perimeter of the square. Draw both shapes below, including dimensions.

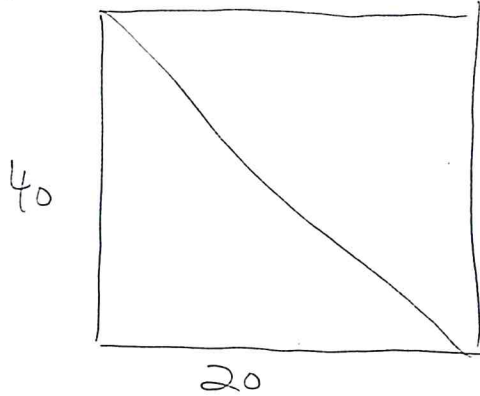


$$\begin{array}{r}
 16 \\
 \times 9 \\
 \hline
 144
 \end{array}$$

$$\sqrt{144} = 12$$



3. Jacob takes a shortcut to school by walking diagonally across an empty lot. The rectangular lot is 20 meters wide and 40 meters long. How much shorter is the shortcut than a route on the sides of the lot? Show all your work.



$$20^2 + 40^2$$

$$400 + 1600$$

$$\sqrt{2000}$$

$$\text{approx } 44.8\text{m}$$

4. Nesters is selling grapes for \$4 per 200g. IGA is selling grapes for \$5 per 250g. Which is a better deal?

$$\$4^{1.4} / 200^{1.4} \text{g}$$

$$4 \overline{) 200} \begin{array}{r} 50 \\ \underline{200} \\ 0 \end{array}$$

$$\$1 / 50\text{g}$$

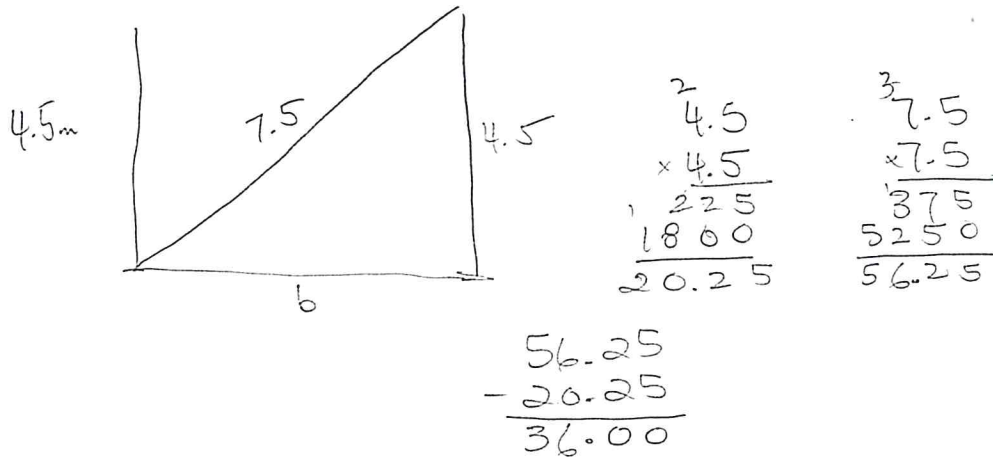
$$\$5^{1.5} / 250^{1.5} \text{g}$$

$$5 \overline{) 250} \begin{array}{r} 50 \\ \underline{250} \\ 0 \end{array}$$

$$\$1 / 50\text{g}$$

The price is the same.

5. There are two flag poles that are 4.5 meters tall. The distance from the top of the left pole to the base of the right pole is 7.5 meters. What is the distance between the 2 flag poles?



The distance is 36 meters.

6. Jane is looking to buy a new bike at Freedom for \$650. It is on sale right now for 20% off. She will have to pay GST of 7% and PST of 5%. How much will she have to pay for the bike?

$$\begin{array}{r} 650 \\ - 130 \\ \hline 520 \end{array}$$

$$\begin{array}{r} 520 \\ \times .07 \\ \hline 36.40 \end{array}$$

$$\begin{array}{r} 520 \\ \times .05 \\ \hline 26.00 \end{array}$$

$$\begin{array}{r} 520.00 \\ + 36.40 \\ + 26.00 \\ \hline 582.40 \end{array}$$

7. In his Marathon of Hope, Terry Fox ran 5373 km in 143 days. At this rate, approximately how many kilometres did he run in 10 days? Show your work.

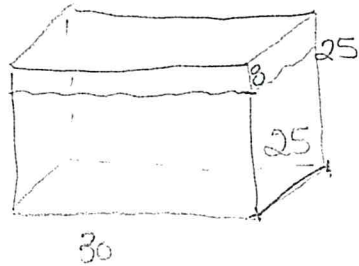
$$5373 / 143 = 37.57$$

$$143 \overline{) 5373}$$

$$37.57 \text{ km/day} \times 10 \text{ days}$$

$$375.7 \text{ km} / 10 \text{ days}$$

8. An aquarium has the dimensions of 30 cm (length) x 25 cm (height) x 25 cm (width). The water is 8 cm from the top. What is the volume of water, in  $\text{cm}^3$ , in the aquarium? Draw a diagram of the aquarium and add all necessary dimensions.



$$\begin{array}{r} 25 \\ - 8 \\ \hline 17 \end{array}$$

$$V = lwh$$

$$25 \cdot 17 \cdot 30$$

$$12,750 \text{ cm}^3$$

9. Gabby has two pieces of ribbon that are each  $6\frac{3}{4}$  m long. She needs to cut each piece into smaller lengths of  $\frac{3}{4}$  m. How many smaller pieces will she have in total? Draw the ribbon lengths and complete the dimensions.

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



$$6\frac{3}{4} \div \frac{3}{4} = \frac{27}{14} \times \frac{4}{3} = 9 \text{ pieces}$$