MORE PARALLEL LINES & PROPORTIONAL SEGMENTS

Use the figure below to complete each statement in problems 1 and 2.

<table>
<thead>
<tr>
<th>1. [ \frac{TA}{AR} = \frac{TI}{R} ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. [ \frac{TA}{TR} = \frac{TO}{OT} ]</td>
</tr>
</tbody>
</table>

Find the value of ‘x’.

<table>
<thead>
<tr>
<th>3. ( x = )</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4. ( x = )</td>
<td></td>
</tr>
</tbody>
</table>

Refer to the figure below for exercises 5 and 6. Determine whether \( AB \parallel YZ \) under the given conditions.

| 5. YES or NO | \( XA = 9 \)  
|---|---|
| \( AY = 6 \)  
| \( XB = 12 \)  
| \( BZ = 7.5 \)  |

In \( \triangle ACB \) find ‘x’ so that \( DE \parallel CB \).

| 6. \( x = \) | \( DC = 6 \)  
|---|---|
| \( AD = 2 \)  
| \( AE = 4 \)  
| \( EB = x - 3 \)  |
Find the values of ‘x’ and ‘y’.

<table>
<thead>
<tr>
<th>7 POINTS EACH</th>
</tr>
</thead>
</table>
| 7.  x = ________  
|     y = ________  |

In the figure at the right, \( \overline{YA} \parallel \overline{OE} \parallel \overline{BR} \). Find the values of ‘x’ and ‘y’ if \( YO = 1 \), \( ER = 4 \), and \( AR = 6 \).

| 8.  x = ________  
|     y = ________  |

Find the value of ‘x’.

| 9.  x = ________  |

| 10. x = __________  |

$$\begin{align*}
3x + 17 & \\
y + 4 & \\
3x - 2 & \\
3y - 8 &
\end{align*}$$

$$\begin{align*}
18 m & \\
x + 11 & \\
12 m & \\
x &
\end{align*}$$

$$\begin{align*}
7x - 2 & \\
3x + 14 &
\end{align*}$$
TAKS PRACTICE

Find the correct answer to each of the following. Clearly circle/bubble in your answer as necessary.

11. Which is not a true proportion for the similar triangle above?

A. \( \frac{8}{x} = \frac{4}{3} \)

B. \( \frac{4}{3} = \frac{x}{8} \)

C. \( \frac{3}{4} = \frac{x}{8} \)

D. \( \frac{4}{x} = \frac{3}{8} \)

12. \( \triangle RST \) is similar to \( \triangle XYZ \). What is the length of side \( YZ \)?

A. 4 cm

B. 5 cm

C. 8 cm

D. 16 cm

13. The ratio of men to women members at Gold’s Gym in College Station is 3:2. If there are 270 male members, what is the total number of members at Gold’s Gym?

A. 180

B. 270

C. 405

D. 450

14. In the triangles below, \( \angle V \) and \( \angle R \) are congruent.

In the diagram above, what is the perimeter of \( \triangle RST \)?

A. 17 in

B. 36 in

C. 51 in

D. 68 in