

## Written Exercises

Justify each step.

A 1.  $4x - 5 = -2$  given  
 $4x = 3$  add  
 $x = \frac{3}{4}$  div

2.  $\frac{3a}{2} = \frac{6}{5}$   
 $3a = \frac{12}{5}$   
 $a = \frac{4}{5}$

3.  $\frac{z+7}{3} = -11$  given  
 $z+7 = -33$  multi.  
 $z = -40$  sub.

4.  $15y + 7 = 12 - 20y$   
 $35y + 7 = 12$   
 $35y = 5$   
 $y = \frac{1}{7}$

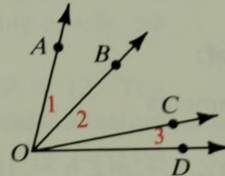
5.  $\frac{2}{3}b = 8 - 2b$  given  
 $2b = 3(8 - 2b)$  multi  
 $2b = 24 - 6b$  dist.  
 $8b = 24$  add  
 $b = 3$  div

6.  $x - 2 = \frac{2x+8}{5}$  given  
 $5(x - 2) = 2x + 8$  multi.  
 $5x - 10 = 2x + 8$  dist.  
 $3x - 10 = 8$  sub.  
 $3x = 18$  add  
 $x = 6$  div.

Copy everything shown and supply missing statements and reasons.

7. Given:  $\angle AOD$  as shown

Prove:  $m\angle AOD = m\angle 1 + m\angle 2 + m\angle 3$



**Proof:**

Statements

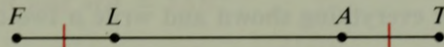
Reasons

1.  $m\angle AOD = m\angle AOC + m\angle 3$
2.  $m\angle AOC = m\angle 1 + m\angle 2$
3.  $m\angle AOD = m\angle 1 + m\angle 2 + m\angle 3$

1. ? angle addition postulate
2. ?
3. ? substitution property

8. Given:  $FL = AT$

Prove:  $FA = LT$



**Proof:**

Statements

Reasons

1. ?
2.  $LA = LA$
3.  $FL + LA = AT + LA$
4.  $FL + LA = FA$ ;  
 $LA + AT = LT$
5. ?

1. Given
2. ?
3. ?
4. ?
5. Substitution Prop.