

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

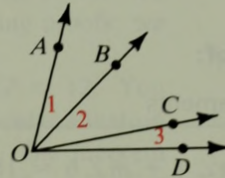
5. $\frac{2}{3}b = 8 - 2b$ given
 $2b = 3(8 - 2b)$ multi
 $2b = 24 - 6b$ dist.
 $8b = 24$ add
 $b = 3$ div

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

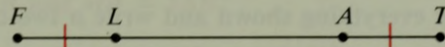
Reasons

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.