**Multiple choices**

|  |  |
| --- | --- |
| **1.** | **Find the value of** $ x$ **in the figure below.**$$ 126° 3x $$$ $ |
|  | **a.** $42°$ | **b.** $18°$ |
|  | **c.** $180°$ | **d.** $ 7°$ |

|  |  |
| --- | --- |
| **2.** | **Which of the following statements is not true?**$ G$$ A$ $ S F H $  |
|  | **a.** $ ∠HFG and ∠GFA $**are** **adjacent angles** | **b.** $∠GFA and∠HFG $**are not adjacent angles** |
|  | **c.** $∠SFA and∠AFH $**are adjacent angles and liner pair** | **d**. $∠HFG and∠SFA $ **are** **not adjacent angles** |

**3.** **Determine whether each pair of angles is a pair of vertical angles, a linear pair of angles, or neither. Select the correct answer for each lettered part.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | $ P C $$$ S F T$$$G$ | **Vertical angles** | **Linear pair of angles** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**4. Find the value of** $x$ **and then the indicated angle measures.**

|  |  |  |
| --- | --- | --- |
|  | **If angles**$ ∠RKL$ **and**$∠PKL$ **are supplementary and** $m∠RKL=3x+20$**,** $ m∠PKL=2x+10, $**what are** $m∠RKL and m∠RKL? $$$ L $$$ $$$ $$$$ \left(2x+10\right)° \left(3x+20\right)°$$$ P K R$  |  |

**5. Find the value of** $x$ **and then the indicated angle measures.**

|  |  |  |
| --- | --- | --- |
|  | $$m∠SAO, m∠OAB, m∠BAG, and m∠GAS=?$$$ O$$$ (x+37)° $$$ $$ S A B$ $$ (3x-43)°$$$$ G $$ |  |

**ANSWERS**

**Multiple choices**

|  |  |
| --- | --- |
| **1.** | **Find the value of** $ x$ **in the figure below.**$$ 126° 3x $$$ $ |
|  | **a.** $42°$ | **b.** $18°$ |
|  | **c.** $180°$ | **d.** $ 7°$ |

|  |  |
| --- | --- |
| **2.** | **Which of the following statements is not true?**$ G$$ A$ $ S F H $  |
|  | **a.** $ ∠HFG and ∠GFA $**are** **adjacent angles** | **b.** $∠GFA and∠HFG $**are not adjacent angles** |
|  | **c.** $∠SFA and∠AFH $**are adjacent angles and liner pair** | **d**. $∠HFG and∠SFA $ **are** **not adjacent angles** |

**3.** **Determine whether each pair of angles is a pair of vertical angles, a linear pair of angles, or neither. Select the correct answer for each lettered part.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | $ P C $$$ S F T$$$G$ | **Vertical angles** | **Linear pair of angles** |
| $$∠TFC and ∠SFG $$ | $$∠GFS and ∠SFC$$ |
| $$∠SFC and ∠TFG$$ | $$∠GFP and ∠CFP$$ |
| $$ $$ | $$∠TFP and ∠SFP$$ |
|  | $$∠TFC and ∠SFC$$ |
|  | $$∠SFG and ∠TFG$$ |

**4. Find the value of** $x$ **and then the indicated angle measures.**

|  |  |  |
| --- | --- | --- |
|  | **If angles**$ ∠RKL$ **and**$∠PKL$ **are supplementary and** $m∠RKL=3x+20$**,** $ m∠PKL=2x+10, $**what are** $m∠RKL and m∠RKL? $$$ L $$$ $$$ $$$$ \left(2x+10\right)° \left(3x+20\right)°$$$ P K R$  | $m∠RKL=3x+20$, $$m∠PKL =2x+10 $$$$m∠RKL=? m∠PKL =? $$$$180=m∠RKL+m∠PKL$$$$180=3x+20+2x+10 $$$$180=5x+30$$$$180-30=5x+30-30$$$$150=5x$$$$x=30$$$$m∠RKL=3x+20 m∠PKL=2x+10 $$$$m∠RKL=3\*30+20 m∠PKL=2\*30+10 $$$$m∠RKL=90+20 m∠PKL=60+10 $$$$m∠RKL=110 m∠PKL=70$$ |

**5. Find the value of** $x$ **and then the indicated angle measures.**

|  |  |  |
| --- | --- | --- |
|  | $$m∠SAO, m∠OAB, m∠BAG, and m∠GAS=?$$$ O$$$ (x+37)° $$$ $$ S A B$ $$ (3x-43)°$$$$ G $$ | $$m∠SAO=x+37 m∠BAG=3x-43$$$$m∠SAO=m∠BAG as vertical angles$$$$x+37=3x-43$$$$x+37+43=3x-43+43$$$$x+80=3x$$$$x+80-x=3x-x$$$$80=2x$$$$x=40$$$$m∠SAO=x+37 m∠OAB= 180-m∠SAO$$$$m∠SAO=40+37 m∠OAB= 180-77$$$$m∠SAO=77 m∠OAB= 103$$$$m∠BAG=77 m∠GAS= 103$$$$ $$ |