## Angle Word Problems Worksheets

1. Find the measures of $\angle E A F, \angle D A E$, and $\angle C A D$

2. Find the measure of $a$.

3. Find the measures of $x$ and $y$.


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## Angle Word Problems Worksheets

1. Find the measures of $\angle E A F, \angle D A E$, and $\angle C A D$
$\angle G A F, \angle E A F, \angle D A E$, and $\angle C A D$ are angles on a line and their measures have a sum of $180^{\circ}$.


$$
\begin{aligned}
6 x+4 x+2 x+30 & =180 \\
12 x+30 & =180 \\
12 x+30-30 & =180-30 \\
12 x & =150 \\
x & =12.5 \\
m \angle E A F=2\left(12.5^{\circ}\right) & =25^{\circ} \\
m \angle D A E=4\left(12.5^{\circ}\right) & =50^{\circ} \\
m \angle C A D=6\left(12.5^{\circ}\right) & =75^{\circ}
\end{aligned}
$$

2. Find the measure of $a$.


Angles $a^{\circ}, 26^{\circ}, a^{\circ}$, and $126^{\circ}$ are angles at a point and have a sum of $360^{\circ}$.

$$
\begin{aligned}
a+126+a+26 & =360 \\
2 a+152 & =360 \\
2 a+152-152 & =360-152 \\
2 a & =208 \\
\left(\frac{1}{2}\right) 2 a & =\left(\frac{1}{2}\right) 208 \\
a & =104
\end{aligned}
$$

3. Find the measures of $x$ and $y$.

Angles $y^{\circ}$ and $65^{\circ}$ and angles $25^{\circ}$ and $x^{\circ}$ have a sum of $90^{\circ}$.


$$
\begin{aligned}
x+25 & =90 \\
x+25-25 & =90-25 \\
x & =65 \\
65+y & =90 \\
65+y & =90 \\
65-65+y & =90-65 \\
y & =25
\end{aligned}
$$

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