

# PRACTICE – Acute, Obtuse, Reflex angles

NAME:

1. Predict whether each value will be positive or negative

a)  $\cos 45^\circ$       b)  $\tan 125^\circ$       c)  $\sin 93^\circ$

d)  $\tan 35^\circ$

e)  $\sin 42^\circ$

f)  $\cos 175^\circ$

2. Angle B is between  $0^\circ$  and  $360^\circ$ , and  $\cos B = -\frac{3}{8}$

a) How many values of  $\angle B$  are there?

b) Is  $\angle B$  acute or obtuse or reflex in Quad III or reflex in Quad IV?

c) Calculate the measures of  $\angle B$ .

3. Angle A is between  $0^\circ$  and  $360^\circ$ , and  $\sin A = \frac{5}{8}$

a) How many values of  $\angle A$  are there?

b) Is  $\angle A$  acute or obtuse or reflex in Quad III or reflex in Quad IV?

c) Calculate the measures of  $\angle A$ .

4. Angle C is between  $0^\circ$  and  $360^\circ$ , and  $\tan C = -\frac{7}{10}$
- How many values of  $\angle C$  are there?
  - Is  $\angle C$  acute or obtuse or reflex in Quad III or reflex in Quad IV?
  - Calculate the measures of  $\angle C$ .

5. Each  $\angle A$  is between  $0^\circ$  and  $360^\circ$ . Find the possible values of  $\angle A$ .

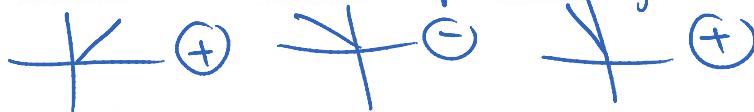
a)  $\sin A = \frac{1}{2}$       b)  $\sin A = \frac{5}{7}$       c)  $\sin A = 0.457$       d)  $\sin A = 0.837$

## PRACTICE – Acute, Obtuse, Reflex angles

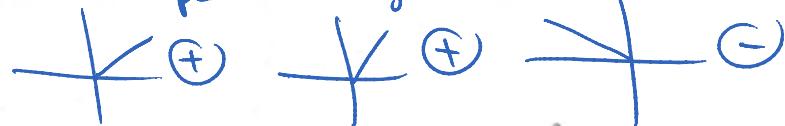
NAME:

1. Predict whether each value will be positive or negative

a)  $\cos 45^\circ = \text{?}$  c)  $\sin 93^\circ = \text{?}$



d)  $\tan 35^\circ = \text{?}$  e)  $\sin 42^\circ = \text{?}$  f)  $\cos 175^\circ = \text{?}$



2. Angle B is between  $0^\circ$  and  $360^\circ$ , and  $\cos B = -\frac{3}{8}$

- a) How many values of
- $\angle B$
- are there?

- b) Is
- $\angle B$
- acute or obtuse or reflex in Quad III or reflex in Quad IV?

- c) Calculate the measures of
- $\angle B$
- .

a) TWO

b)

obtuse II and reflex III

c) rough:  $B = \cos^{-1} \left( -\frac{3}{8} \right)$

$B_1 = 112^\circ \text{ II}$   
 $B_2 = 248^\circ \text{ III}$

3. Angle A is between  $0^\circ$  and  $360^\circ$ , and  $\sin A = \frac{5}{8}$

- a) How many values of
- $\angle A$
- are there?

- b) Is
- $\angle A$
- acute or obtuse or reflex in Quad III or reflex in Quad IV?

- c) Calculate the measures of
- $\angle A$
- .

a) TWO



acute I and obtuse II

c) rough:  $A = \sin^{-1} \left( \frac{5}{8} \right)$

$A_1 = 39^\circ \text{ I}$

$A_2 = 141^\circ \text{ II}$

4. Angle C is between  $0^\circ$  and  $360^\circ$ , and  $\tan C = -\frac{7}{10}$

- a) How many values of  $\angle C$  are there?  
b) Is  $\angle C$  acute or obtuse or reflex in Quad III or reflex in Quad IV?  
c) Calculate the measures of  $\angle C$ .

a) Two



obtuse II or reflex IV

c) rough:  $C = \tan^{-1}\left(-\frac{7}{10}\right)$

$C = -35^\circ$  IV

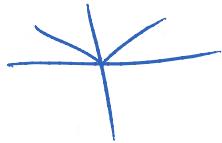
but not positive

$\therefore C_1 = 325^\circ$  IV

$C_2 = 145^\circ$  II

5. Each  $\angle A$  is between  $0^\circ$  and  $360^\circ$ . Find the possible values of  $\angle A$ .

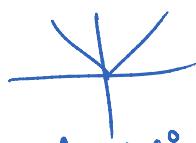
a)  $\sin A = \frac{1}{2}$



$A_1 = 30^\circ$

$A_2 = 150^\circ$

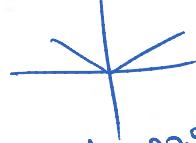
b)  $\sin A = \frac{5}{7}$



$A_1 = 46^\circ$

$A_2 = 134^\circ$

c)  $\sin A = 0.457$



$A_1 = 27^\circ$

$A_2 = 153^\circ$

d)  $\sin A = 0.837$



$A_1 = 57^\circ$

$A_2 = 123^\circ$